

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use  
SEQUENCE LISTING

<110> Cellzome AG

<120> Protein complexes of the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for using the same

<130> Protein complexes of the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for using the same

<150> EP02016110.5

<151> 2002-07-19

<150> EP03101321.2

<151> 2003-05-12

<160> 18

<170> PatentIn version 3.1

<210> 1

<211> 919

<212> PRT

<213> Homo sapiens

<400> 1

Met Glu Val Gln Leu Gly Leu Gly Arg Val Tyr Pro Arg Pro Pro Ser  
1 5 10 15

Lys Thr Tyr Arg Gly Ala Phe Gln Asn Leu Phe Gln Ser Val Arg Glu  
20 25 30

Val Ile Gln Asn Pro Gly Pro Arg His Pro Glu Ala Ala Ser Ala Ala  
35 40 45

Pro Pro Gly Ala Ser Leu Leu Leu Leu Gln Gln Gln Gln Gln Gln  
50 55 60

Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Thr  
65 70 75 80

Ser Pro Arg Gln Gln Gln Gln Gln Gln Gly Glu Asp Gly Ser Pro Gln  
85 90 95

Ala His Arg Arg Gly Pro Thr Gly Tyr Leu Val Leu Asp Glu Glu Gln  
100 105 110

Gln Pro Ser Gln Pro Gln Ser Ala Leu Glu Cys His Pro Glu Arg Gly  
115 120 125

Cys Val Pro Glu Pro Gly Ala Ala Val Ala Ala Ser Lys Gly Leu Pro  
130 135 140

Gln Gln Leu Pro Ala Pro Pro Asp Glu Asp Asp Ser Ala Ala Pro Ser  
145 150 155 160

Thr Leu Ser Leu Leu Gly Pro Thr Phe Pro Gly Leu Ser Ser Cys Ser  
165 170 175

Ala Asp Leu Lys Asp Ile Leu Ser Glu Ala Ser Thr Met Gln Leu Leu  
180 185 190

Gln Gln Gln Gln Gln Glu Ala Val Ser Glu Gly Ser Ser Ser Gly Arg  
195 200 205

Ala Arg Glu Ala Ser Gly Ala Pro Thr Ser Ser Lys Asp Asn Tyr Leu  
210 215 220

Gly Gly Thr Ser Thr Ile Ser Asp Asn Ala Lys Glu Leu Cys Lys Ala  
225 230 235 240

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Val Ser Val Ser Met Gly Leu Gly Val Glu Ala Leu Glu His Leu Ser  
245 250 255

Pro Gly Glu Gln Leu Arg Gly Asp Cys Met Tyr Ala Pro Leu Leu Gly  
260 265 270

Val Pro Pro Ala Val Arg Pro Thr Pro Cys Ala Pro Leu Ala Glu Cys  
275 280 285

Lys Gly Ser Leu Leu Asp Asp Ser Ala Gly Lys Ser Thr Glu Asp Thr  
290 295 300

Ala Glu Tyr Ser Pro Phe Lys Gly Gly Tyr Thr Lys Gly Leu Glu Gly  
305 310 315 320

Glu Ser Leu Gly Cys Ser Gly Ser Ala Ala Ala Gly Ser Ser Gly Thr  
325 330 335

Leu Glu Leu Pro Ser Thr Leu Ser Leu Tyr Lys Ser Gly Ala Leu Asp  
340 345 350

Glu Ala Ala Ala Tyr Gln Ser Arg Asp Tyr Tyr Asn Phe Pro Leu Ala  
355 360 365

Leu Ala Gly Pro Pro Pro Pro Pro Pro Pro His Pro His Ala Arg  
370 375 380

Ile Lys Leu Glu Asn Pro Leu Asp Tyr Gly Ser Ala Trp Ala Ala Ala  
385 390 395 400

Ala Ala Gln Cys Arg Tyr Gly Asp Leu Ala Ser Leu His Gly Ala Gly  
405 410 415

Ala Ala Gly Pro Gly Ser Gly Ser Pro Ser Ala Ala Ala Ser Ser Ser  
420 425 430

Trp His Thr Leu Phe Thr Ala Glu Glu Gly Gln Leu Tyr Gly Pro Cys  
435 440 445

Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly  
450 455 460

Gly Gly Gly Gly Gly Gly Gly Glu Ala Gly Ala Val Ala Pro Tyr  
465 470 475 480

Gly Tyr Thr Arg Pro Pro Gln Gly Leu Ala Gly Gln Glu Ser Asp Phe  
485 490 495

Thr Ala Pro Asp Val Trp Tyr Pro Gly Gly Met Val Ser Arg Val Pro  
500 505 510

Tyr Pro Ser Pro Thr Cys Val Lys Ser Glu Met Gly Pro Trp Met Asp  
515 520 525

Ser Tyr Ser Gly Pro Tyr Gly Asp Met Arg Leu Glu Thr Ala Arg Asp  
530 535 540

His Val Leu Pro Ile Asp Tyr Tyr Phe Pro Pro Gln Lys Thr Cys Leu  
545 550 555 560

Ile Cys Gly Asp Glu Ala Ser Gly Cys His Tyr Gly Ala Leu Thr Cys  
565 570 575

Gly Ser Cys Lys Val Phe Phe Lys Arg Ala Ala Glu Gly Lys Gln Lys

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Tyr Leu Cys Ala Ser Arg Asn Asp Cys Thr Ile Asp Lys Phe Arg Arg  
 580 585 590  
 Lys Asn Cys Pro Ser Cys Arg Leu Arg Lys Cys Tyr Glu Ala Gly Met  
 610 615 620  
 Thr Leu Gly Ala Arg Lys Leu Lys Lys Leu Gly Asn Leu Lys Leu Gln  
 625 630 635 640  
 Glu Glu Gly Glu Ala Ser Ser Thr Thr Ser Pro Thr Glu Glu Thr Thr  
 645 650 655  
 Gln Lys Leu Thr Val Ser His Ile Glu Gly Tyr Glu Cys Gln Pro Ile  
 660 665 670  
 Phe Leu Asn Val Leu Glu Ala Ile Glu Pro Gly Val Val Cys Ala Gly  
 675 680 685  
 His Asp Asn Asn Gln Pro Asp Ser Phe Ala Ala Leu Leu Ser Ser Leu  
 690 695 700  
 Asn Glu Leu Gly Glu Arg Gln Leu Val His Val Val Lys Trp Ala Lys  
 705 710 715 720  
 Ala Leu Pro Gly Phe Arg Asn Leu His Val Asp Asp Gln Met Ala Val  
 725 730 735  
 Ile Gln Tyr Ser Trp Met Gly Leu Met Val Phe Ala Met Gly Trp Arg  
 740 745 750  
 Ser Phe Thr Asn Val Asn Ser Arg Met Leu Tyr Phe Ala Pro Asp Leu  
 755 760 765  
 Val Phe Asn Glu Tyr Arg Met His Lys Ser Arg Met Tyr Ser Gln Cys  
 770 775 780  
 Val Arg Met Arg His Leu Ser Gln Glu Phe Gly Trp Leu Gln Ile Thr  
 785 790 795 800  
 Pro Gln Glu Phe Leu Cys Met Lys Ala Leu Leu Leu Phe Ser Ile Ile  
 805 810 815  
 Pro Val Asp Gly Leu Lys Asn Gln Lys Phe Phe Asp Glu Leu Arg Met  
 820 825 830  
 Asn Tyr Ile Lys Glu Leu Asp Arg Ile Ile Ala Cys Lys Arg Lys Asn  
 835 840 845  
 Pro Thr Ser Cys Ser Arg Arg Phe Tyr Gln Leu Thr Lys Leu Leu Asp  
 850 855 860  
 Ser Val Gln Pro Ile Ala Arg Glu Leu His Gln Phe Thr Phe Asp Leu  
 865 870 875 880  
 Leu Ile Lys Ser His Met Val Ser Val Asp Phe Pro Glu Met Met Ala  
 885 890 895  
 Glu Ile Ile Ser Val Gln Val Pro Lys Ile Leu Ser Gly Lys Val Lys  
 900 905 910  
 Pro Ile Tyr Phe His Thr Gln  
 915

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

```

<210> 2
<211> 375
<212> PRT
<213> Homo sapiens

<400> 2
Met Asp Asp Asp Ile Ala Ala Leu Val Val Asp Asn Gly Ser Gly Met
1      5      10      15
Cys Lys Ala Gly Phe Ala Gly Asp Asp Ala Pro Arg Ala Val Phe Pro
20      25      30
Ser Ile Val Gly Arg Pro Arg His Gln Gly Val Met Val Gly Met Gly
35      40      45
Gln Lys Asp Ser Tyr Val Gly Asp Glu Ala Gln Ser Lys Arg Gly Ile
50      55      60
Leu Thr Leu Lys Tyr Pro Ile Glu His Gly Ile Val Thr Asn Trp Asp
65      70      75      80
Asp Met Glu Lys Ile Trp His His Thr Phe Tyr Asn Glu Leu Arg Val
85      90      95
Ala Pro Glu Glu His Pro Val Leu Leu Thr Glu Ala Pro Leu Asn Pro
100     105     110
Lys Ala Asn Arg Glu Lys Met Thr Gln Ile Met Phe Glu Thr Phe Asn
115     120     125
Thr Pro Ala Met Tyr Val Ala Ile Gln Ala Val Leu Ser Leu Tyr Ala
130     135     140
Ser Gly Arg Thr Thr Gly Ile Val Met Asp Ser Gly Asp Gly Val Thr
145     150     155     160
His Thr Val Pro Ile Tyr Glu Gly Tyr Ala Leu Pro His Ala Ile Leu
165     170     175
Arg Leu Asp Leu Ala Gly Arg Asp Leu Thr Asp Tyr Leu Met Lys Ile
180     185     190
Leu Thr Glu Arg Gly Tyr Ser Phe Thr Thr Thr Ala Glu Arg Glu Ile
195     200     205
Val Arg Asp Ile Lys Glu Lys Leu Cys Tyr Val Ala Leu Asp Phe Glu
210     215     220
Gln Glu Met Ala Thr Ala Ala Ser Ser Ser Ser Leu Glu Lys Ser Tyr
225     230     235     240
Glu Leu Pro Asp Gly Gln Val Ile Thr Ile Gly Asn Glu Arg Phe Arg
245     250     255
Cys Pro Glu Ala Leu Phe Gln Pro Ser Phe Leu Gly Met Glu Ser Cys
260     265     270
Gly Ile His Glu Thr Thr Phe Asn Ser Ile Met Lys Cys Asp Val Asp
275     280     285
Ile Arg Lys Asp Leu Tyr Ala Asn Thr Val Leu Ser Gly Gly Thr Thr
290     295     300
Met Tyr Pro Gly Ile Ala Asp Arg Met Gln Lys Glu Ile Thr Ala Leu
305     310     315     320

```

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Ala Pro Ser Thr Met Lys Ile Lys Ile Ile Ala Pro Pro Glu Arg Lys  
325 330 335

Tyr Ser Val Trp Ile Gly Gly Ser Ile Leu Ala Ser Leu Ser Thr Phe  
340 345 350

Gln Gln Met Trp Ile Ser Lys Gln Glu Tyr Asp Glu Ser Gly Pro Ser  
355 360 365

Ile Val His Arg Lys Cys Phe  
370 375

<210> 3  
<211> 429  
<212> PRT  
<213> Homo sapiens

<400> 3

Met Ser Gly Gly Val Tyr Gly Gly Asp Glu Val Gly Ala Leu Val Phe  
1 5 10 15

Asp Ile Gly Ser Tyr Thr Val Arg Ala Gly Tyr Ala Gly Glu Asp Cys  
20 25 30

Pro Lys Val Asp Phe Pro Thr Ala Ile Gly Met Val Val Glu Arg Asp  
35 40 45

Asp Gly Ser Thr Leu Met Glu Ile Asp Gly Asp Lys Gly Lys Gln Gly  
50 55 60

Gly Pro Thr Tyr Tyr Ile Asp Thr Asn Ala Leu Arg Val Pro Arg Glu  
65 70 75 80

Asn Met Glu Ala Ile Ser Pro Leu Lys Asn Gly Met Val Glu Asp Trp  
85 90 95

Asp Ser Phe Gln Ala Ile Leu Asp His Thr Tyr Lys Met His Val Lys  
100 105 110

Ser Glu Ala Ser Leu His Pro Val Leu Met Ser Glu Ala Pro Trp Asn  
115 120 125

Thr Arg Ala Lys Arg Glu Lys Leu Thr Glu Leu Met Phe Glu His Tyr  
130 135 140

Asn Ile Pro Ala Phe Phe Leu Cys Lys Thr Ala Val Leu Thr Ala Phe  
145 150 155 160

Ala Asn Gly Arg Ser Thr Gly Leu Ile Leu Asp Ser Gly Ala Thr His  
165 170 175

Thr Thr Ala Ile Pro Val His Asp Gly Tyr Val Leu Gln Gln Gly Ile  
180 185 190

Val Lys Ser Pro Leu Ala Gly Asp Phe Ile Thr Met Gln Cys Arg Glu  
195 200 205

Leu Phe Gln Glu Met Asn Ile Glu Leu Val Pro Pro Tyr Met Ile Ala  
210 215 220

Ser Lys Glu Ala Val Arg Glu Gly Ser Pro Ala Asn Trp Lys Arg Lys  
225 230 235 240

Glu Lys Leu Pro Gln Val Thr Arg Ser Trp His Asn Tyr Met Cys Asn

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Cys Val Ile Gln Asp Phe Gln Ala Ser Val Leu Gln Val Ser Asp Ser  
245 250 255

Thr Tyr Asp Glu Gln Val Ala Ala Gln Met Pro Thr Val His Tyr Glu  
275 280 285

Phe Pro Asn Gly Tyr Asn Cys Asp Phe Gly Ala Glu Arg Leu Lys Ile  
290 295 300

Pro Glu Gly Leu Phe Asp Pro Ser Asn Val Lys Gly Leu Ser Gly Asn  
305 310 315 320

Thr Met Leu Gly Val Ser His Val Val Thr Thr Ser Val Gly Met Cys  
325 330 335

Asp Ile Asp Ile Arg Pro Gly Leu Tyr Gly Ser Val Ile Val Ala Gly  
340 345 350

Gly Asn Thr Leu Ile Gln Ser Phe Thr Asp Arg Leu Asn Arg Glu Leu  
355 360 365

Ser Gln Lys Thr Pro Pro Ser Met Arg Leu Lys Leu Ile Ala Asn Asn  
370 375 380

Thr Thr Val Glu Arg Arg Phe Ser Ser Trp Ile Gly Gly Ser Ile Leu  
385 390 395 400

Ala Ser Leu Gly Thr Phe Gln Gln Met Trp Ile Ser Lys Gln Glu Tyr  
405 410 415

Glu Glu Gly Gly Lys Gln Cys Val Glu Arg Lys Cys Pro  
420 425

<210> 4  
<211> 204  
<212> PRT  
<213> Homo sapiens

<400> 4

Met Gly Glu Ala Glu Val Gly Gly Gly Gly Ala Ala Gly Asp Lys Gly  
1 5 10 15

Pro Gly Glu Ala Ala Thr Ser Pro Ala Glu Glu Thr Val Val Trp Ser  
20 25 30

Pro Glu Val Glu Val Cys Leu Phe His Ala Met Leu Gly His Lys Pro  
35 40 45

Val Gly Val Asn Arg His Phe His Met Ile Cys Ile Arg Asp Lys Phe  
50 55 60

Ser Gln Asn Ile Gly Arg Gln Val Pro Ser Lys Val Ile Trp Asp His  
65 70 75 80

Leu Ser Thr Met Tyr Asp Met Gln Ala Leu His Glu Ser Glu Ile Leu  
85 90 95

Pro Phe Pro Asn Pro Glu Arg Asn Phe Val Leu Pro Glu Glu Ile Ile  
100 105 110

Gln Glu Val Arg Glu Gly Lys Val Met Ile Glu Glu Glu Met Lys Glu  
115 120 125

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Glu Met Lys Glu Asp Val Asp Pro His Asn Gly Ala Asp Asp Val Phe  
130 135 140

Ser Ser Ser Gly Ser Leu Gly Lys Ala Ser Glu Lys Ser Ser Lys Asp  
145 150 155 160

Lys Glu Lys Asn Ser Ser Asp Leu Gly Cys Lys Glu Gly Ala Asp Lys  
165 170 175

Arg Lys Arg Ser Arg Val Thr Asp Lys Val Leu Thr Ala Asn Ser Asn  
180 185 190

Pro Ser Ser Pro Ser Ala Ala Lys Arg Arg Arg Thr  
195 200

<210> 5  
<211> 467  
<212> PRT  
<213> Homo sapiens

<400> 5

Met Ala Thr Gly Ala Asp Val Arg Asp Ile Leu Glu Leu Gly Gly Pro  
1 5 10 15

Glu Gly Asp Ala Ala Ser Gly Thr Ile Ser Lys Lys Asp Ile Ile Asn  
20 25 30

Pro Asp Lys Lys Lys Ser Lys Lys Ser Ser Glu Thr Leu Thr Phe Lys  
35 40 45

Arg Pro Glu Gly Met His Arg Glu Val Tyr Ala Leu Leu Tyr Ser Asp  
50 55 60

Lys Lys Asp Ala Pro Pro Leu Leu Pro Ser Asp Thr Gly Gln Gly Tyr  
65 70 75 80

Arg Thr Val Lys Ala Lys Leu Gly Ser Lys Lys Val Arg Pro Trp Lys  
85 90 95

Trp Met Pro Phe Thr Asn Pro Ala Arg Lys Asp Gly Ala Met Phe Phe  
100 105 110

His Trp Arg Arg Ala Ala Glu Glu Gly Lys Asp Tyr Pro Phe Ala Arg  
115 120 125

Phe Asn Lys Thr Val Gln Val Pro Val Tyr Ser Glu Gln Glu Tyr Gln  
130 135 140

Leu Tyr Leu His Asp Asp Ala Trp Thr Lys Ala Glu Thr Asp His Leu  
145 150 155 160

Phe Asp Leu Ser Arg Arg Phe Asp Leu Arg Phe Val Val Ile His Asp  
165 170 175

Arg Tyr Asp His Gln Gln Phe Lys Lys Arg Ser Val Glu Asp Leu Lys  
180 185 190

Glu Arg Tyr Tyr His Ile Cys Ala Lys Leu Ala Asn Val Arg Ala Val  
195 200 205

Pro Gly Thr Asp Leu Lys Ile Pro Val Phe Asp Ala Gly His Glu Arg  
210 215 220

Arg Arg Lys Glu Gln Leu Glu Arg Leu Tyr Asn Arg Thr Pro Glu Gln  
225 230 235 240

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Val Ala Glu Glu Tyr Leu Leu Gln Glu Leu Arg Lys Ile Glu Ala  
245 250 255

Arg Lys Lys Glu Arg Glu Lys Arg Ser Gln Asp Leu Gln Lys Leu Ile  
260 265 270

Thr Ala Ala Asp Thr Thr Ala Glu Gln Arg Arg Thr Glu Arg Lys Ala  
275 280 285

Pro Lys Lys Lys Leu Pro Gln Lys Lys Glu Ala Glu Lys Pro Ala Val  
290 295 300

Pro Glu Thr Ala Gly Ile Lys Phe Pro Asp Phe Lys Ser Ala Gly Val  
305 310 315 320

Thr Leu Arg Ser Gln Arg Met Lys Leu Pro Ser Ser Val Gly Gln Lys  
325 330 335

Lys Ile Lys Ala Leu Glu Gln Met Leu Leu Glu Leu Gly Val Glu Leu  
340 345 350

Ser Pro Thr Pro Thr Glu Glu Leu Val His Met Phe Asn Glu Leu Arg  
355 360 365

Ser Asp Leu Val Leu Leu Tyr Glu Leu Lys Gln Ala Cys Ala Asn Cys  
370 375 380

Glu Tyr Glu Leu Gln Met Leu Arg His Arg His Glu Ala Leu Ala Arg  
385 390 395 400

Ala Gly Val Leu Gly Gly Pro Ala Thr Pro Ala Ser Gly Pro Gly Pro  
405 410 415

Ala Ser Ala Glu Pro Ala Val Thr Glu Pro Gly Leu Gly Pro Asp Pro  
420 425 430

Lys Asp Thr Ile Ile Asp Val Val Gly Ala Pro Leu Thr Pro Asn Ser  
435 440 445

Arg Lys Arg Arg Glu Ser Ala Ser Ser Ser Ser Val Lys Lys Ala  
450 455 460

Lys Lys Pro  
465

<210> 6  
<211> 463  
<212> PRT  
<213> Homo sapiens

<400> 6

Met Ala Thr Val Thr Ala Thr Thr Lys Val Pro Glu Ile Arg Asp Val  
1 5 10 15

Thr Arg Ile Glu Arg Ile Gly Ala His Ser His Ile Arg Gly Leu Gly  
20 25 30

Leu Asp Asp Ala Leu Glu Pro Arg Gln Ala Ser Gln Gly Met Val Gly  
35 40 45

Gln Leu Ala Ala Arg Arg Ala Ala Gly Val Val Leu Glu Met Ile Arg  
50 55 60

Glu Gly Lys Ile Ala Gly Arg Ala Val Leu Ile Ala Gly Gln Pro Gly  
65 70 75 80

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Thr Gly Lys Thr Ala Ile Ala Met Gly Met Ala Gln Ala Leu Gly Pro  
85 90 95

Asp Thr Pro Phe Thr Ala Ile Ala Gly Ser Glu Ile Phe Ser Leu Glu  
100 105 110

Met Ser Lys Thr Glu Ala Leu Thr Gln Ala Phe Arg Arg Ser Ile Gly  
115 120 125

Val Arg Ile Lys Glu Glu Thr Glu Ile Ile Glu Gly Glu Val Val Glu  
130 135 140

Ile Gln Ile Asp Arg Pro Ala Thr Gly Thr Gly Ser Lys Val Gly Lys  
145 150 155 160

Leu Thr Leu Lys Thr Thr Glu Met Glu Thr Ile Tyr Asp Leu Gly Thr  
165 170 175

Lys Met Ile Glu Ser Leu Thr Lys Asp Lys Val Gln Ala Gly Asp Val  
180 185 190

Ile Thr Ile Asp Lys Ala Thr Gly Lys Ile Ser Lys Leu Gly Arg Ser  
195 200 205

Phe Thr Arg Ala Arg Asp Tyr Asp Ala Met Gly Ser Gln Thr Lys Phe  
210 215 220

Val Gln Cys Pro Asp Gly Glu Leu Gln Lys Arg Lys Glu Val Val His  
225 230 235 240

Thr Val Ser Leu His Glu Ile Asp Val Ile Asn Ser Arg Thr Gln Gly  
245 250 255

Phe Leu Ala Leu Phe Ser Gly Asp Thr Gly Glu Ile Lys Ser Glu Val  
260 265 270

Arg Glu Gln Ile Asn Ala Lys Val Ala Glu Trp Arg Glu Glu Gly Lys  
275 280 285

Ala Glu Ile Ile Pro Gly Val Leu Phe Ile Asp Glu Val His Met Leu  
290 295 300

Asp Ile Glu Ser Phe Ser Phe Leu Asn Arg Ala Leu Glu Ser Asp Met  
305 310 315 320

Ala Pro Val Leu Ile Met Ala Thr Asn Arg Gly Ile Thr Arg Ile Arg  
325 330 335

Gly Thr Ser Tyr Gln Ser Pro His Gly Ile Pro Ile Asp Leu Leu Asp  
340 345 350

Arg Leu Leu Ile Val Ser Thr Thr Pro Tyr Ser Glu Lys Asp Thr Lys  
355 360 365

Gln Ile Leu Arg Ile Arg Cys Glu Glu Glu Asp Val Glu Met Ser Glu  
370 375 380

Asp Ala Tyr Thr Val Leu Thr Arg Ile Gly Leu Glu Thr Ser Leu Arg  
385 390 395 400

Tyr Ala Ile Gln Leu Ile Thr Ala Ala Ser Leu Val Cys Arg Lys Arg  
405 410 415

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use  
 Lys Gly Thr Glu Val Gln Val Asp Asp Ile Lys Arg Val Tyr Ser Leu  
                   420                  425                  430

Phe Leu Asp Glu Ser Arg Ser Thr Gln Tyr Met Lys Glu Tyr Gln Asp  
           435                  440                  445

Ala Phe Leu Phe Asn Glu Leu Lys Gly Glu Thr Met Asp Thr Ser  
       450                  455                  460

<210> 7  
 <211> 3124  
 <212> PRT  
 <213> Homo sapiens

<400> 7

Met His His Gly Thr Gly Pro Gln Asn Val Gln His Gln Leu Gln Arg  
 1                  5                  10                  15

Ser Arg Ala Cys Pro Gly Ser Glu Gly Glu Glu Gln Pro Ala His Pro  
           20                  25                  30

Asn Pro Pro Pro Ser Pro Ala Ala Pro Phe Ala Pro Ser Ala Ser Pro  
           35                  40                  45

Ser Ala Pro Gln Ser Pro Ser Tyr Gln Ile Gln Gln Leu Met Asn Arg  
       50                  55                  60

Ser Pro Ala Thr Gly Gln Asn Val Asn Ile Thr Leu Gln Ser Val Gly  
 65                  70                  75                  80

Pro Val Val Gly Gly Asn Gln Gln Ile Thr Leu Ala Pro Leu Pro Leu  
           85                  90                  95

Pro Ser Pro Thr Ser Pro Gly Phe Gln Phe Ser Ala Gln Pro Arg Arg  
           100                  105                  110

Phe Glu His Gly Ser Pro Ser Tyr Ile Gln Val Thr Ser Pro Leu Ser  
           115                  120                  125

Gln Gln Val Gln Thr Gln Ser Pro Thr Gln Pro Ser Pro Gly Pro Gly  
       130                  135                  140

Gln Ala Leu Gln Asn Val Arg Ala Gly Ala Pro Gly Pro Gly Leu Gly  
 145                  150                  155                  160

Leu Cys Ser Ser Ser Pro Thr Gly Gly Phe Val Asp Ala Ser Val Leu  
           165                  170                  175

Val Arg Gln Ile Ser Leu Ser Pro Ser Ser Gly Gly His Phe Val Phe  
           180                  185                  190

Gln Asp Gly Ser Gly Leu Thr Gln Ile Ala Gln Gly Ala Gln Val Gln  
       195                  200                  205

Leu Gln His Pro Gly Thr Pro Ile Thr Val Arg Glu Arg Arg Pro Ser  
       210                  215                  220

Gln Pro His Thr Gln Ser Gly Gly Thr Ile His His Leu Gly Pro Gln  
       225                  230                  235                  240

Ser Pro Ala Ala Ala Gly Gly Ala Gly Leu Gln Pro Leu Ala Ser Pro  
           245                  250                  255

Ser His Ile Thr Thr Ala Asn Leu Pro Pro Gln Ile Ser Ser Ile Ile  
           260                  265                  270

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Gln Gly Gln Leu Val Gln Gln Gln Gln Val Leu Gln Gly Pro Pro Leu  
275 280 285

Pro Arg Pro Leu Gly Phe Glu Arg Thr Pro Gly Val Leu Leu Pro Gly  
290 295 300

Ala Gly Gly Ala Ala Gly Phe Gly Met Thr Ser Pro Pro Pro Pro Thr  
305 310 315 320

Ser Pro Ser Arg Thr Ala Val Pro Pro Gly Leu Ser Ser Leu Pro Leu  
325 330 335

Thr Ser Val Gly Asn Thr Gly Met Lys Lys Val Pro Lys Lys Leu Glu  
340 345 350

Glu Ile Pro Pro Ala Ser Pro Glu Met Ala Gln Met Arg Lys Gln Cys  
355 360 365

Leu Asp Tyr His Tyr Gln Glu Met Gln Ala Leu Lys Glu Val Phe Lys  
370 375 380

Glu Tyr Leu Ile Glu Leu Phe Phe Leu Gln His Phe Gln Gly Asn Met  
385 390 395 400

Met Asp Phe Leu Ala Phe Lys Lys Lys His Tyr Ala Pro Leu Gln Ala  
405 410 415

Tyr Leu Arg Gln Asn Asp Leu Asp Ile Glu Glu Glu Glu Glu Glu Glu  
420 425 430

Glu Glu Glu Glu Glu Lys Ser Glu Val Ile Asn Asp Glu Gln Gln Ala  
435 440 445

Leu Ala Gly Ser Leu Val Ala Gly Ala Gly Ser Thr Val Glu Thr Asp  
450 455 460

Leu Phe Lys Arg Gln Gln Ala Met Pro Ser Thr Gly Met Ala Glu Gln  
465 470 475 480

Ser Lys Arg Pro Arg Leu Glu Val Gly His Gln Gly Val Val Phe Gln  
485 490 495

His Pro Gly Ala Asp Ala Gly Val Pro Leu Gln Gln Leu Met Pro Thr  
500 505 510

Ala Gln Gly Gly Met Pro Pro Thr Pro Gln Ala Ala Gln Leu Ala Gly  
515 520 525

Gln Arg Gln Ser Gln Gln Gln Tyr Asp Pro Ser Thr Gly Pro Pro Val  
530 535 540

Gln Asn Ala Ala Ser Leu His Thr Pro Leu Pro Gln Leu Pro Gly Arg  
545 550 555 560

Leu Pro Pro Ala Gly Val Pro Thr Ala Ala Leu Ser Ser Ala Leu Gln  
565 570 575

Phe Ala Gln Gln Pro Gln Val Val Glu Ala Gln Thr Gln Leu Gln Ile  
580 585 590

Pro Val Lys Thr Gln Gln Pro Asn Val Pro Ile Pro Ala Pro Pro Ser  
595 600 605

Ser Gln Leu Pro Ile Pro Pro Ser Gln Pro Ala Gln Leu Ala Leu His

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Val Pro Thr Pro Gly Lys Val Gln Val Gln Ala Ser Gln Leu Ser Ser  
 610 615 620 625 630 635 640  
 Leu Pro Gln Met Val Ala Ser Thr Arg Leu Pro Val Asp Pro Ala Pro  
 645 650 655  
 Pro Cys Pro Arg Pro Leu Pro Thr Ser Ser Thr Ser Ser Leu Ala Pro  
 660 665 670  
 Val Ser Gly Ser Gly Pro Gly Pro Ser Pro Ala Arg Ser Ser Pro Val  
 675 680 685  
 Asn Arg Pro Ser Ser Ala Thr Asn Lys Ala Leu Ser Pro Val Thr Ser  
 690 695 700  
 Arg Thr Pro Gly Val Val Ala Ser Ala Pro Thr Lys Pro Gln Ser Pro  
 705 710 715 720  
 Ala Gln Asn Ala Thr Ser Ser Gln Asp Ser Ser Gln Asp Thr Leu Thr  
 725 730 735  
 Glu Gln Ile Thr Leu Glu Asn Gln Val His Gln Arg Ile Ala Glu Leu  
 740 745 750  
 Arg Lys Ala Gly Leu Trp Ser Gln Arg Arg Leu Pro Lys Leu Gln Glu  
 755 760 765  
 Ala Pro Arg Pro Lys Ser His Trp Asp Tyr Leu Leu Glu Glu Met Gln  
 770 775 780  
 Trp Met Ala Thr Asp Phe Ala Gln Glu Arg Arg Trp Lys Val Ala Ala  
 785 790 795 800  
 Ala Lys Lys Leu Val Arg Thr Val Val Arg His His Glu Glu Lys Gln  
 805 810 815  
 Leu Arg Glu Glu Arg Gly Lys Lys Glu Glu Gln Ser Arg Leu Arg Arg  
 820 825 830  
 Ile Ala Ala Ser Thr Ala Arg Glu Ile Glu Cys Phe Trp Ser Asn Ile  
 835 840 845  
 Glu Gln Val Val Glu Ile Lys Leu Arg Val Glu Leu Glu Glu Lys Arg  
 850 855 860  
 Lys Lys Ala Leu Asn Leu Gln Lys Val Ser Arg Arg Gly Lys Glu Leu  
 865 870 875 880  
 Arg Pro Lys Gly Phe Asp Ala Leu Gln Glu Ser Ser Leu Asp Ser Gly  
 885 890 895  
 Met Ser Gly Arg Lys Arg Lys Ala Ser Ile Ser Leu Thr Asp Asp Glu  
 900 905 910  
 Val Asp Asp Glu Glu Glu Thr Ile Glu Glu Glu Glu Ala Asn Glu Gly  
 915 920 925  
 Val Val Asp His Gln Thr Glu Leu Ser Asn Leu Ala Lys Glu Ala Glu  
 930 935 940  
 Leu Pro Leu Leu Asp Leu Met Lys Leu Tyr Glu Gly Ala Phe Leu Pro  
 945 950 955 960

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Ser Ser Gln Trp Pro Arg Pro Lys Pro Asp Gly Glu Asp Thr Ser Gly  
965 970 975

Glu Glu Asp Ala Asp Asp Cys Pro Gly Asp Arg Glu Ser Arg Lys Asp  
980 985 990

Leu Val Leu Ile Asp Ser Leu Phe Ile Met Asp Gln Phe Lys Ala Ala  
995 1000 1005

Glu Arg Met Asn Ile Gly Lys Pro Asn Ala Lys Asp Ile Ala Asp  
1010 1015 1020

Val Thr Ala Val Ala Glu Ala Ile Leu Pro Lys Gly Ser Ala Arg  
1025 1030 1035

Val Thr Thr Ser Val Lys Phe Asn Ala Pro Ser Leu Leu Tyr Gly  
1040 1045 1050

Ala Leu Arg Asp Tyr Gln Lys Ile Gly Leu Asp Trp Leu Ala Lys  
1055 1060 1065

Leu Tyr Arg Lys Asn Leu Asn Gly Ile Leu Ala Asp Glu Ala Gly  
1070 1075 1080

Leu Gly Lys Thr Val Gln Ile Ile Ala Phe Phe Ala His Leu Ala  
1085 1090 1095

Cys Asn Glu Gly Asn Trp Gly Pro His Leu Val Val Val Arg Ser  
1100 1105 1110

Cys Asn Ile Leu Lys Trp Glu Leu Glu Leu Lys Arg Trp Cys Pro  
1115 1120 1125

Gly Leu Lys Ile Leu Ser Tyr Ile Gly Ser His Arg Glu Leu Lys  
1130 1135 1140

Ala Lys Arg Gln Glu Trp Ala Glu Pro Asn Ser Phe His Val Cys  
1145 1150 1155

Ile Thr Ser Tyr Thr Gln Phe Phe Arg Gly Leu Thr Ala Phe Thr  
1160 1165 1170

Arg Val Arg Trp Lys Cys Leu Val Ile Asp Glu Met Gln Arg Val  
1175 1180 1185

Lys Gly Met Thr Glu Arg His Trp Glu Ala Val Phe Thr Leu Gln  
1190 1195 1200

Ser Gln Gln Arg Leu Leu Leu Ile Asp Ser Pro Leu His Asn Thr  
1205 1210 1215

Phe Leu Glu Leu Trp Thr Met Val His Phe Leu Val Pro Gly Ile  
1220 1225 1230

Ser Arg Pro Tyr Leu Ser Ser Pro Leu Arg Ala Pro Ser Glu Glu  
1235 1240 1245

Ser Gln Asp Tyr Tyr His Lys Val Val Ile Arg Leu His Arg Val  
1250 1255 1260

Thr Gln Pro Phe Ile Leu Arg Arg Thr Lys Arg Asp Val Glu Lys  
1265 1270 1275

Gln Leu Thr Lys Lys Tyr Glu His Val Leu Lys Cys Arg Leu Ser

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

1280                      1285                      1290  
 Asn Arg Gln Lys Ala Leu Tyr Glu Asp Val Ile Leu Gln Pro Gly  
 1295                      1300                      1305  
 Thr Gln Glu Ala Leu Lys Ser Gly His Phe Val Asn Val Leu Ser  
 1310                      1315                      1320  
 Ile Leu Val Arg Leu Gln Arg Ile Cys Asn His Pro Gly Leu Val  
 1325                      1330                      1335  
 Glu Pro Arg His Pro Gly Ser Ser Tyr Val Ala Gly Pro Leu Glu  
 1340                      1345                      1350  
 Tyr Pro Ser Ala Ser Leu Ile Leu Lys Ala Leu Glu Arg Asp Phe  
 1355                      1360                      1365  
 Trp Lys Glu Ala Asp Leu Ser Met Phe Asp Leu Ile Gly Leu Glu  
 1370                      1375                      1380  
 Asn Lys Ile Thr Arg His Glu Ala Glu Leu Leu Ser Lys Lys Lys  
 1385                      1390                      1395  
 Ile Pro Arg Lys Leu Met Glu Glu Ile Ser Thr Ser Ala Ala Pro  
 1400                      1405                      1410  
 Ala Ala Arg Pro Ala Ala Ala Lys Leu Lys Ala Ser Arg Leu Phe  
 1415                      1420                      1425  
 Gln Pro Val Gln Tyr Gly Gln Lys Pro Glu Gly Arg Thr Val Ala  
 1430                      1435                      1440  
 Phe Pro Ser Thr His Pro Pro Arg Thr Ala Ala Pro Thr Thr Ala  
 1445                      1450                      1455  
 Ser Ala Ala Pro Gln Gly Pro Leu Arg Gly Arg Pro Pro Ile Ala  
 1460                      1465                      1470  
 Thr Phe Ser Ala Asn Pro Glu Ala Lys Ala Ala Ala Ala Pro Phe  
 1475                      1480                      1485  
 Gln Thr Ser Gln Ala Ser Ala Ser Ala Pro Arg His Gln Pro Ala  
 1490                      1495                      1500  
 Ser Ala Ser Ser Thr Ala Ala Ser Pro Ala His Pro Ala Lys Leu  
 1505                      1510                      1515  
 Arg Ala Gln Thr Thr Ala Gln Ala Phe Thr Pro Gly Gln Pro Pro  
 1520                      1525                      1530  
 Pro Gln Pro Gln Ala Pro Ser His Ala Ala Gly Gln Ser Ala Leu  
 1535                      1540                      1545  
 Pro Gln Arg Leu Val Leu Pro Ser Gln Ala Gln Ala Arg Leu Pro  
 1550                      1555                      1560  
 Ser Gly Glu Val Val Lys Ile Ala Gln Leu Ala Ser Ile Thr Gly  
 1565                      1570                      1575  
 Pro Gln Ser Arg Val Ala Gln Pro Glu Thr Pro Val Thr Leu Gln  
 1580                      1585                      1590  
 Phe Gln Gly Ser Lys Phe Thr Leu Ser His Ser Gln Phe Arg Gln  
 1595                      1600                      1605

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Phe Thr Ala Gly Gln Pro Leu Gln Leu Gln Gly Ser Val Leu Gln  
 1610 1615 1620  
 Ile Val Ser Ala Pro Gly Gln Pro Tyr Leu Arg Ala Pro Gly Pro  
 1625 1630 1635  
 Val Val Met Gln Thr Val Ser Gln Ala Gly Ala Val His Gly Ala  
 1640 1645 1650  
 Leu Gly Ser Lys Pro Pro Ala Gly Gly Pro Ser Pro Ala Pro Leu  
 1655 1660 1665  
 Thr Pro Gln Val Gly Val Pro Gly Arg Val Ala Val Asn Ala Leu  
 1670 1675 1680  
 Ala Val Gly Glu Pro Gly Thr Ala Ser Lys Pro Ala Ser Pro Ile  
 1685 1690 1695  
 Gly Gly Pro Thr Gln Glu Glu Lys Thr Arg Leu Leu Lys Glu Arg  
 1700 1705 1710  
 Leu Asp Gln Ile Tyr Leu Val Asn Glu Arg Arg Cys Ser Gln Ala  
 1715 1720 1725  
 Pro Val Tyr Gly Arg Asp Leu Leu Arg Ile Cys Ala Leu Pro Ser  
 1730 1735 1740  
 His Gly Arg Val Gln Trp Arg Gly Ser Leu Asp Gly Arg Arg Gly  
 1745 1750 1755  
 Lys Glu Ala Gly Pro Ala His Ser Tyr Thr Ser Ser Ser Glu Ser  
 1760 1765 1770  
 Pro Ser Glu Leu Met Leu Thr Leu Cys Arg Cys Gly Glu Ser Leu  
 1775 1780 1785  
 Gln Asp Val Ile Asp Arg Val Ala Phe Val Ile Pro Pro Val Val  
 1790 1795 1800  
 Ala Ala Pro Pro Ser Leu Arg Val Pro Arg Pro Pro Pro Leu Tyr  
 1805 1810 1815  
 Ser His Arg Met Arg Ile Leu Arg Gln Gly Leu Arg Glu His Ala  
 1820 1825 1830  
 Ala Pro Tyr Phe Gln Gln Leu Arg Gln Thr Thr Ala Pro Arg Leu  
 1835 1840 1845  
 Leu Gln Phe Pro Glu Leu Arg Leu Val Gln Phe Asp Ser Gly Lys  
 1850 1855 1860  
 Leu Glu Ala Leu Ala Ile Leu Leu Gln Lys Leu Lys Ser Glu Gly  
 1865 1870 1875  
 Arg Arg Val Leu Ile Leu Ser Gln Met Ile Leu Met Leu Asp Ile  
 1880 1885 1890  
 Leu Glu Met Phe Leu Asn Phe His Tyr Leu Thr Tyr Val Arg Ile  
 1895 1900 1905  
 Asp Glu Asn Ala Ser Ser Glu Gln Arg Gln Glu Leu Met Arg Ser  
 1910 1915 1920  
 Phe Asn Arg Asp Arg Arg Ile Phe Cys Ala Ile Leu Ser Thr His

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Ser Arg Thr Thr Gly Ile Asn Leu Val Glu Ala Asp Thr Val Val  
 1925 1930 1935  
 1940 1945 1950  
 Phe Tyr Asp Asn Asp Leu Asn Pro Val Met Asp Ala Lys Ala Gln  
 1955 1960 1965  
 Glu Trp Cys Asp Arg Ile Gly Arg Cys Lys Asp Ile His Ile Tyr  
 1970 1975 1980  
 Arg Leu Val Ser Gly Asn Ser Ile Glu Glu Lys Leu Leu Lys Asn  
 1985 1990 1995  
 Gly Thr Lys Asp Leu Ile Arg Glu Val Ala Ala Gln Gly Asn Asp  
 2000 2005 2010  
 Tyr Ser Met Ala Phe Leu Thr Gln Arg Thr Ile Gln Glu Leu Phe  
 2015 2020 2025  
 Glu Val Tyr Ser Pro Met Asp Asp Ala Gly Phe Pro Val Lys Ala  
 2030 2035 2040  
 Glu Glu Phe Val Val Leu Ser Gln Glu Pro Ser Val Thr Glu Thr  
 2045 2050 2055  
 Ile Ala Pro Lys Ile Ala Arg Pro Phe Ile Glu Ala Leu Lys Ser  
 2060 2065 2070  
 Ile Glu Tyr Leu Glu Glu Asp Ala Gln Lys Ser Ala Gln Glu Gly  
 2075 2080 2085  
 Val Leu Gly Pro His Thr Asp Ala Leu Ser Ser Asp Ser Glu Asn  
 2090 2095 2100  
 Met Pro Cys Asp Glu Glu Pro Ser Gln Leu Glu Glu Leu Ala Asp  
 2105 2110 2115  
 Phe Met Glu Gln Leu Thr Pro Ile Glu Lys Tyr Ala Leu Asn Tyr  
 2120 2125 2130  
 Leu Glu Leu Phe His Thr Ser Ile Glu Gln Glu Lys Glu Arg Asn  
 2135 2140 2145  
 Ser Glu Asp Ala Val Met Thr Ala Val Arg Ala Trp Glu Phe Trp  
 2150 2155 2160  
 Asn Leu Lys Thr Leu Gln Glu Arg Glu Ala Arg Leu Arg Leu Glu  
 2165 2170 2175  
 Gln Glu Glu Ala Glu Leu Leu Thr Tyr Thr Arg Glu Asp Ala Tyr  
 2180 2185 2190  
 Ser Met Glu Tyr Val Tyr Glu Asp Val Asp Gly Gln Thr Glu Val  
 2195 2200 2205  
 Met Pro Leu Trp Thr Pro Pro Thr Pro Pro Gln Asp Asp Ser Asp  
 2210 2215 2220  
 Ile Tyr Leu Asp Ser Val Met Cys Leu Met Tyr Glu Ala Thr Pro  
 2225 2230 2235  
 Ile Pro Glu Ala Lys Leu Pro Pro Val Tyr Val Arg Lys Glu Arg  
 2240 2245 2250

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Lys Arg His Lys Thr Asp Pro Ser Ala Ala Gly Arg Lys Lys Lys  
 2255 2260 2265  
 Gln Arg His Gly Glu Ala Val Val Pro Pro Arg Ser Leu Phe Asp  
 2270 2275 2280  
 Arg Ala Thr Pro Gly Leu Leu Lys Ile Arg Arg Glu Gly Lys Glu  
 2285 2290 2295  
 Gln Lys Lys Asn Ile Leu Leu Lys Gln Gln Val Pro Phe Ala Lys  
 2300 2305 2310  
 Pro Leu Pro Thr Phe Ala Lys Pro Thr Ala Glu Pro Gly Gln Asp  
 2315 2320 2325  
 Asn Pro Glu Trp Leu Ile Ser Glu Asp Trp Ala Leu Leu Gln Ala  
 2330 2335 2340  
 Val Lys Gln Leu Leu Glu Leu Pro Leu Asn Leu Thr Ile Val Ser  
 2345 2350 2355  
 Pro Ala His Thr Pro Asn Trp Asp Leu Val Ser Asp Val Val Asn  
 2360 2365 2370  
 Ser Cys Ser Arg Ile Tyr Arg Ser Ser Lys Gln Cys Arg Asn Arg  
 2375 2380 2385  
 Tyr Glu Asn Val Ile Ile Pro Arg Glu Glu Gly Lys Ser Lys Asn  
 2390 2395 2400  
 Asn Arg Pro Leu Arg Thr Ser Gln Ile Tyr Ala Gln Asp Glu Asn  
 2405 2410 2415  
 Ala Thr His Thr Gln Leu Tyr Thr Ser His Phe Asp Leu Met Lys  
 2420 2425 2430  
 Met Thr Ala Gly Lys Arg Ser Pro Pro Ile Lys Pro Leu Leu Gly  
 2435 2440 2445  
 Met Asn Pro Phe Gln Lys Asn Pro Lys His Ala Ser Val Leu Ala  
 2450 2455 2460  
 Glu Ser Gly Ile Asn Tyr Asp Lys Pro Leu Pro Pro Ile Gln Val  
 2465 2470 2475  
 Ala Ser Leu Arg Ala Glu Arg Ile Ala Lys Glu Lys Lys Ala Leu  
 2480 2485 2490  
 Ala Asp Gln Gln Lys Ala Gln Gln Pro Ala Val Ala Gln Pro Pro  
 2495 2500 2505  
 Pro Pro Gln Pro Gln Pro Pro Pro Pro Pro Gln Gln Pro Pro Pro  
 2510 2515 2520  
 Pro Leu Pro Gln Pro Gln Ala Ala Gly Ser Gln Pro Pro Ala Gly  
 2525 2530 2535  
 Pro Pro Ala Val Gln Pro Gln Pro Gln Pro Gln Pro Gln Thr Gln  
 2540 2545 2550  
 Pro Gln Pro Val Gln Ala Pro Ala Lys Ala Gln Pro Ala Ile Thr  
 2555 2560 2565  
 Thr Gly Gly Ser Ala Ala Val Leu Ala Gly Thr Ile Lys Thr Ser

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Val Thr Gly Thr Ser Met Pro Thr Gly Ala Val Ser Gly Asn Val  
 2570 2575 2580  
 Val Thr 2585  
 Ile Val Asn Thr Ile Ala Gly Val Pro Ala Ala Thr Phe Gln Ser  
 2600 2605 2610  
 Ile Asn Lys Arg Leu Ala Ser Pro Val Ala Pro Gly Ala Leu Thr  
 2615 2620 2625  
 Thr Pro Gly Gly Ser Ala Pro Ala Gln Val Val His Thr Gln Pro  
 2630 2635 2640  
 Pro Pro Arg Ala Val Gly Ser Pro Ala Thr Ala Thr Pro Asp Leu  
 2645 2650 2655  
 Val Ser Met Ala Thr Thr Gln Gly Val Arg Ala Val Thr Ser Val  
 2660 2665 2670  
 Thr Ala Ser Ala Val Val Thr Thr Asn Leu Thr Pro Val Gln Thr  
 2675 2680 2685  
 Pro Ala Arg Ser Leu Val Pro Gln Val Ser Gln Ala Thr Gly Val  
 2690 2695 2700  
 Gln Leu Pro Gly Lys Thr Ile Thr Pro Ala His Phe Gln Leu Leu  
 2705 2710 2715  
 Arg Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln  
 2720 2725 2730  
 Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln  
 2735 2740 2745  
 Gln Thr Thr Thr Thr Ser Gln Val Gln Val Pro Gln Ile Gln Gly  
 2750 2755 2760  
 Gln Ala Gln Ser Pro Ala Gln Ile Lys Ala Val Gly Lys Leu Thr  
 2765 2770 2775  
 Pro Glu His Leu Ile Lys Met Gln Lys Gln Lys Leu Gln Met Pro  
 2780 2785 2790  
 Pro Gln Pro Pro Pro Pro Gln Ala Gln Ser Ala Pro Pro Gln Pro  
 2795 2800 2805  
 Ala Ala Gln Val Gln Val Gln Thr Ser Gln Pro Pro Gln Gln Gln  
 2810 2815 2820  
 Ser Pro Gln Leu Thr Thr Val Thr Ala Pro Arg Pro Gly Ala Leu  
 2825 2830 2835  
 Leu Thr Gly Thr Thr Val Ala Asn Leu Gln Val Ala Arg Leu Thr  
 2840 2845 2850  
 Arg Val Pro Thr Ser Gln Leu Gln Ser Gln Gly Gln Met Gln Thr  
 2855 2860 2865  
 Gln Ala Pro Gln Pro Ala Gln Val Pro Leu Pro Lys Pro Pro Val  
 2870 2875 2880  
 Val Ser Val Pro Ala Ala Val Val Ser Ser Pro Gly Val Thr Thr  
 2885 2890 2895

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Leu Pro Met Asn Val Ala Gly Ile Ser Val Ala Ile Gly Gln Pro  
2900 2905 2910

Gln Lys Ala Ala Gly Gln Thr Val Val Ala Gln Pro Val His Met  
2915 2920 2925

Gln Gln Leu Leu Lys Leu Lys Gln Gln Ala Val Gln Gln Gln Lys  
2930 2935 2940

Ala Ile Gln Pro Gln Ala Ala Gln Gly Pro Ala Thr Val Gln Gln  
2945 2950 2955

Lys Ile Thr Ala Gln Gln Ile Thr Thr Pro Gly Ala Gln Gln Lys  
2960 2965 2970

Val Ala Tyr Ala Ala Gln Pro Ala Leu Lys Thr Gln Phe Leu Thr  
2975 2980 2985

Thr Pro Ile Ser Gln Ala Gln Lys Leu Ala Gly Ala Gln Gln Val  
2990 2995 3000

Gln Thr Gln Ile Gln Val Ala Lys Leu Pro Gln Val Val Gln Gln  
3005 3010 3015

Gln Thr Pro Val Ala Ser Ile Gln Gln Val Ala Ser Ala Ser Gln  
3020 3025 3030

Gln Ala Ser Pro Gln Thr Val Ala Leu Thr Gln Ala Thr Ala Ala  
3035 3040 3045

Gly Gln Gln Val Gln Met Ile Pro Ala Val Thr Ala Thr Ala Gln  
3050 3055 3060

Val Val Gln Gln Lys Leu Ile Gln Gln Gln Val Val Thr Thr Ala  
3065 3070 3075

Ser Ala Pro Leu Gln Thr Pro Gly Ala Pro Asn Pro Ala Gln Val  
3080 3085 3090

Pro Ala Ser Ser Asp Ser Pro Ser Gln Gln Pro Lys Leu Gln Met  
3095 3100 3105

Arg Val Pro Ala Val Arg Leu Lys Thr Pro Thr Lys Pro Pro Cys  
3110 3115 3120

Gln

<210> 8  
<211> 836  
<212> PRT  
<213> Homo sapiens  
<400> 8

Met Ser Lys Leu Ser Phe Arg Ala Arg Ala Leu Asp Ala Ser Lys Pro  
1 5 10 15

Leu Pro Val Phe Arg Cys Glu Asp Leu Pro Asp Leu His Glu Tyr Ala  
20 25 30

Ser Ile Asn Arg Ala Val Pro Gln Met Pro Thr Gly Met Glu Lys Glu  
35 40 45

Glu Glu Ser Glu His His Leu Gln Arg Ala Ile Ser Ala Gln Gln Val  
50 55 60

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Tyr Gly Glu Lys Arg Asp Asn Met Val Ile Pro Val Pro Glu Ala Glu  
 65 70 75 80  
 Ser Asn Ile Ala Tyr Glu Ser Ile Tyr Pro Gly Glu Phe Lys Met  
 85 90 95  
 Pro Lys Gln Leu Ile His Ile Gln Pro Phe Ser Leu Asp Ala Glu Gln  
 100 105 110  
 Pro Asp Tyr Asp Leu Asp Ser Glu Asp Glu Val Phe Val Asn Lys Leu  
 115 120 125  
 Lys Lys Lys Met Asp Ile Cys Pro Leu Gln Phe Glu Glu Met Ile Asp  
 130 135 140  
 Arg Leu Glu Lys Gly Ser Gly Gln Gln Pro Val Ser Leu Gln Glu Ala  
 145 150 155 160  
 Lys Leu Leu Leu Lys Glu Asp Asp Glu Leu Ile Arg Glu Val Tyr Glu  
 165 170 175  
 Tyr Trp Ile Lys Lys Arg Lys Asn Cys Arg Gly Pro Ser Leu Ile Pro  
 180 185 190  
 Ser Val Lys Gln Glu Lys Arg Asp Gly Ser Ser Thr Asn Asp Pro Tyr  
 195 200 205  
 Val Ala Phe Arg Arg Arg Thr Glu Lys Met Gln Thr Arg Lys Asn Arg  
 210 215 220  
 Lys Asn Asp Glu Ala Ser Tyr Glu Lys Met Leu Lys Leu Arg Arg Asp  
 225 230 235 240  
 Leu Ser Arg Ala Val Thr Ile Leu Glu Met Ile Lys Arg Arg Glu Lys  
 245 250 255  
 Ser Lys Arg Glu Leu Leu His Leu Thr Leu Glu Ile Met Glu Lys Arg  
 260 265 270  
 Tyr Asn Leu Gly Asp Tyr Asn Gly Glu Ile Met Ser Glu Val Met Ala  
 275 280 285  
 Gln Arg Gln Pro Met Lys Pro Thr Tyr Ala Ile Pro Ile Ile Pro Ile  
 290 295 300  
 Thr Asn Ser Ser Gln Phe Lys His Gln Glu Ala Met Asp Val Lys Glu  
 305 310 315 320  
 Phe Lys Val Asn Lys Gln Asp Lys Ala Asp Leu Ile Arg Pro Lys Arg  
 325 330 335  
 Lys Tyr Glu Lys Lys Pro Lys Val Leu Pro Ser Ser Ala Ala Ala Thr  
 340 345 350  
 Pro Gln Gln Thr Ser Pro Ala Ala Leu Pro Val Phe Asn Ala Lys Asp  
 355 360 365  
 Leu Asn Gln Tyr Asp Phe Pro Ser Ser Asp Glu Glu Pro Leu Ser Gln  
 370 375 380  
 Val Leu Ser Gly Ser Ser Glu Ala Glu Glu Asp Asn Asp Pro Asp Gly  
 385 390 395 400

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Pro Phe Ala Phe Arg Arg Lys Ala Gly Cys Gln Tyr Tyr Ala Pro His  
405 410 415

Leu Asp Gln Thr Gly Asn Trp Pro Trp Thr Ser Pro Lys Asp Gly Gly  
420 425 430

Leu Gly Asp Val Arg Tyr Arg Tyr Cys Leu Thr Thr Leu Thr Val Pro  
435 440 445

Gln Arg Cys Ile Gly Phe Ala Arg Arg Arg Val Gly Arg Gly Gly Arg  
450 455 460

Val Leu Leu Asp Arg Ala His Ser Asp Tyr Asp Ser Val Phe His His  
465 470 475 480

Leu Asp Leu Glu Met Leu Ser Ser Pro Gln His Ser Pro Val Asn Gln  
485 490 495

Phe Ala Asn Thr Ser Glu Thr Asn Thr Ser Asp Lys Ser Phe Ser Lys  
500 505 510

Asp Leu Ser Gln Ile Leu Val Asn Ile Lys Ser Cys Arg Trp Arg His  
515 520 525

Phe Arg Pro Arg Thr Pro Ser Leu His Asp Ser Asp Asn Asp Glu Leu  
530 535 540

Ser Cys Arg Lys Leu Tyr Arg Ser Ile Asn Arg Thr Gly Thr Ala Gln  
545 550 555 560

Pro Gly Thr Gln Thr Cys Ser Thr Ser Thr Gln Ser Lys Ser Ser Ser  
565 570 575

Gly Ser Ala His Phe Ala Phe Thr Ala Glu Gln Tyr Gln Gln His Gln  
580 585 590

Gln Gln Leu Ala Leu Met Gln Lys Gln Gln Leu Ala Gln Ile Gln Gln  
595 600 605

Gln Gln Ala Asn Ser Asn Ser Ser Thr Asn Thr Ser Gln Asn Leu Ala  
610 615 620

Ser Asn Gln Gln Lys Ser Gly Phe Arg Leu Asn Ile Gln Gly Leu Glu  
625 630 635 640

Arg Thr Leu Gln Gly Phe Val Ser Lys Thr Leu Asp Ser Ala Ser Ala  
645 650 655

Gln Phe Ala Ala Ser Ala Leu Val Thr Ser Glu Gln Leu Met Gly Phe  
660 665 670

Lys Met Lys Asp Asp Val Val Leu Gly Ile Gly Val Asn Gly Val Leu  
675 680 685

Pro Ala Ser Gly Val Tyr Lys Gly Leu His Leu Ser Ser Thr Thr Pro  
690 695 700

Thr Ala Leu Val His Thr Ser Pro Ser Thr Ala Gly Ser Ala Leu Leu  
705 710 715 720

Gln Pro Ser Asn Ile Thr Gln Thr Ser Ser Ser His Ser Ala Leu Ser  
725 730 735

His Gln Val Thr Ala Ala Asn Ser Ala Thr Thr Gln Val Leu Ile Gly  
740 745 750

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Asn Asn Ile Arg Leu Thr Val Pro Ser Ser Val Ala Thr Val Asn Ser  
755 760 765

Ile Ala Pro Ile Asn Ala Arg His Ile Pro Arg Thr Leu Ser Ala Val  
770 775 780

Pro Ser Ser Ala Leu Lys Leu Ala Ala Ala Ala Asn Cys Gln Val Ser  
785 790 795 800

Lys Val Pro Ser Ser Ser Ser Val Asp Ser Val Pro Arg Glu Asn His  
805 810 815

Glu Ser Glu Lys Pro Ala Leu Asn Asn Ile Ala Asp Asn Thr Val Ala  
820 825 830

Met Glu Val Thr  
835

<210> 9  
<211> 227  
<212> PRT  
<213> Homo sapiens

<400> 9

Met Phe Lys Arg Met Ala Glu Phe Gly Pro Asp Ser Gly Gly Arg Val  
1 5 10 15

Lys Gly Val Thr Ile Val Lys Pro Ile Val Tyr Gly Asn Val Ala Arg  
20 25 30

Tyr Phe Gly Lys Lys Arg Glu Glu Asp Gly His Thr His Gln Trp Thr  
35 40 45

Val Tyr Val Lys Pro Tyr Arg Asn Glu Asp Met Ser Ala Tyr Val Lys  
50 55 60

Lys Ile Gln Phe Lys Leu His Glu Ser Tyr Gly Asn Pro Leu Arg Val  
65 70 75 80

Val Thr Lys Pro Pro Tyr Glu Ile Thr Glu Thr Gly Trp Gly Glu Phe  
85 90 95

Glu Ile Ile Ile Lys Ile Phe Phe Ile Asp Pro Asn Glu Arg Pro Val  
100 105 110

Thr Leu Tyr His Leu Leu Lys Leu Phe Gln Ser Asp Thr Asn Ala Met  
115 120 125

Leu Gly Lys Lys Thr Val Val Ser Glu Phe Tyr Asp Glu Met Ile Phe  
130 135 140

Gln Asp Pro Thr Ala Met Met Gln Gln Leu Leu Thr Thr Ser Arg Gln  
145 150 155 160

Leu Thr Leu Gly Ala Tyr Lys His Glu Thr Glu Phe Ala Glu Leu Glu  
165 170 175

Val Lys Thr Arg Glu Lys Leu Glu Ala Ala Lys Lys Lys Thr Ser Phe  
180 185 190

Glu Ile Ala Glu Leu Lys Glu Arg Leu Lys Ala Ser Arg Glu Thr Ile  
195 200 205

Asn Cys Leu Lys Asn Glu Ile Arg Lys Leu Glu Glu Asp Asp Gln Ala

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Lys Asp Ile  
225

<210> 10  
<211> 482  
<212> PRT  
<213> Homo sapiens

<400> 10

Met Ala Gln Thr Gln Gly Thr Arg Arg Lys Val Cys Tyr Tyr Tyr Asp  
1 5 10 15

Gly Asp Val Gly Asn Tyr Tyr Tyr Gly Gln Gly His Pro Met Lys Pro  
20 25 30

His Arg Ile Arg Met Thr His Asn Leu Leu Leu Asn Tyr Gly Leu Tyr  
35 40 45

Arg Lys Met Glu Ile Tyr Arg Pro His Lys Ala Asn Ala Glu Glu Met  
50 55 60

Thr Lys Tyr His Ser Asp Asp Tyr Ile Lys Phe Leu Arg Ser Ile Arg  
65 70 75 80

Pro Asp Asn Met Ser Glu Tyr Ser Lys Gln Met Gln Arg Phe Asn Val  
85 90 95

Gly Glu Asp Cys Pro Val Phe Asp Gly Leu Phe Glu Phe Cys Gln Leu  
100 105 110

Ser Thr Gly Gly Ser Val Ala Ser Ala Val Lys Leu Asn Lys Gln Gln  
115 120 125

Thr Asp Ile Ala Val Asn Trp Ala Gly Gly Leu His His Ala Lys Lys  
130 135 140

Ser Glu Ala Ser Gly Phe Cys Tyr Val Asn Asp Ile Val Leu Ala Ile  
145 150 155 160

Leu Glu Leu Leu Lys Tyr His Gln Arg Val Leu Tyr Ile Asp Ile Asp  
165 170 175

Ile His His Gly Asp Gly Val Glu Glu Ala Phe Tyr Thr Thr Asp Arg  
180 185 190

Val Met Thr Val Ser Phe His Lys Tyr Gly Glu Tyr Phe Pro Gly Thr  
195 200 205

Gly Asp Leu Arg Asp Ile Gly Ala Gly Lys Gly Lys Tyr Tyr Ala Val  
210 215 220

Asn Tyr Pro Leu Arg Asp Gly Ile Asp Asp Glu Ser Tyr Glu Ala Ile  
225 230 235 240

Phe Lys Pro Val Met Ser Lys Val Met Glu Met Phe Gln Pro Ser Ala  
245 250 255

Val Val Leu Gln Cys Gly Ser Asp Ser Leu Ser Gly Asp Arg Leu Gly  
260 265 270

Cys Phe Asn Leu Thr Ile Lys Gly His Ala Lys Cys Val Glu Phe Val  
275 280 285

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Lys Ser Phe Asn Leu Pro Met Leu Met Leu Gly Gly Gly Tyr Thr  
290 295 300

Ile Arg Asn Val Ala Arg Cys Trp Thr Tyr Glu Thr Ala Val Ala Leu  
305 310 320

Asp Thr Glu Ile Pro Asn Glu Leu Pro Tyr Asn Asp Tyr Phe Glu Tyr  
325 330 335

Phe Gly Pro Asp Phe Lys Leu His Ile Ser Pro Ser Asn Met Thr Asn  
340 345 350

Gln Asn Thr Asn Glu Tyr Leu Glu Lys Ile Lys Gln Arg Leu Phe Glu  
355 360 365

Asn Leu Arg Met Leu Pro His Ala Pro Gly Val Gln Met Gln Ala Ile  
370 375 380

Pro Glu Asp Ala Ile Pro Glu Glu Ser Gly Asp Glu Asp Glu Asp Asp  
385 390 395 400

Pro Asp Lys Arg Ile Ser Ile Cys Ser Ser Asp Lys Arg Ile Ala Cys  
405 410 415

Glu Glu Glu Phe Ser Asp Ser Glu Glu Glu Gly Glu Gly Arg Lys  
420 425 430

Asn Ser Ser Asn Phe Lys Lys Ala Lys Arg Val Lys Thr Glu Asp Glu  
435 440 445

Lys Glu Lys Asp Pro Glu Glu Lys Lys Glu Val Thr Glu Glu Glu Lys  
450 455 460

Thr Lys Glu Glu Lys Pro Glu Ala Lys Gly Val Lys Glu Glu Val Lys  
465 470 475 480

Leu Ala

<210> 11  
<211> 1727  
<212> PRT  
<213> Homo sapiens

<400> 11

Ala Leu Leu His Phe Met Arg Glu Lys Glu Gln Glu Arg Glu Gln  
1 5 10 15

Leu Met Glu Asp Lys Lys Arg Lys Lys Glu Asp Lys Lys Lys Glu  
20 25 30

Ala Thr Gln Lys Val Thr Glu Gln Lys Thr Lys Val Pro Glu Val Thr  
35 40 45

Lys pro Ser Leu Ser Gln pro Thr Ala Ala Ser pro Ile Gly Ser Ser  
50 55 60

Pro ser Pro Pro Val Asn Gly Gly Asn Asn Ala Lys Arg Val Ala Val  
65 70 75 80

Pro Asn Gly Gln Pro Pro Ser Ala Ala Arg Tyr Met Pro Arg Glu Val  
85 90 95

Pro Pro Arg Phe Arg Cys Gln Gln Asp His Lys Val Leu Leu Lys Arg  
100 105 110

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Gly Gln Pro Pro Pro Pro Ser Cys Met Leu Leu Gly Gly Gly Ala Gly  
115 120 125

Pro Pro Pro Cys Thr Ala Pro Gly Ala Asn Pro Asn Asn Ala Gln Val  
130 135 140

Thr Gly Ala Leu Leu Gln Ser Glu Ser Gly Thr Ala Pro Asp Ser Thr  
145 150 155 160

Leu Gly Gly Ala Ala Ala Ser Asn Tyr Ala Asn Ser Thr Trp Gly Ser  
165 170 175

Gly Ala Ser Ser Asn Asn Gly Thr Ser Pro Asn Pro Ile His Ile Trp  
180 185 190

Asp Lys Val Ile Val Asp Gly Ser Asp Met Glu Glu Trp Pro Cys Ile  
195 200 205

Ala Ser Lys Asp Thr Glu Ser Ser Ser Glu Asn Thr Thr Asp Asn Asn  
210 215 220

Ser Ala Ser Asn Pro Gly Ser Glu Lys Ser Thr Leu Pro Gly Ser Thr  
225 230 235 240

Thr Ser Asn Lys Gly Lys Gly Ser Gln Cys Gln Ser Ala Ser Ser Gly  
245 250 255

Asn Glu Cys Asn Leu Gly Val Trp Lys Ser Asp Pro Lys Ala Lys Ser  
260 265 270

Val Gln Ser Ser Asn Ser Thr Thr Glu Asn Asn Asn Gly Leu Gly Asn  
275 280 285

Trp Arg Asn Val Ser Gly Gln Asp Arg Ile Gly Pro Gly Ser Gly Phe  
290 295 300

Ser Asn Phe Asn Pro Asn Ser Asn Pro Ser Ala Trp Pro Ala Leu Val  
305 310 315 320

Gln Glu Gly Thr Ser Arg Lys Gly Ala Leu Glu Thr Asp Asn Ser Asn  
325 330 335

Ser Ser Ala Gln Val Ser Thr Val Gly Gln Thr Ser Arg Glu Gln Gln  
340 345 350

Ser Lys Met Glu Asn Ala Gly Val Asn Phe Val Val Ser Gly Arg Glu  
355 360 365

Gln Ala Gln Ile His Asn Thr Asp Gly Pro Lys Asn Gly Asn Thr Asn  
370 375 380

Ser Leu Asn Leu Ser Ser Pro Asn Pro Met Glu Asn Lys Gly Met Pro  
385 390 395 400

Phe Gly Met Gly Leu Gly Asn Thr Ser Arg Ser Thr Asp Ala Pro Ser  
405 410 415

Gln Ser Thr Gly Asp Arg Lys Thr Gly Ser Val Gly Ser Trp Gly Ala  
420 425 430

Ala Arg Gly Pro Ser Gly Thr Asp Thr Val Ser Gly Gln Ser Asn Ser  
435 440 445

Gly Asn Asn Gly Asn Asn Gly Lys Glu Arg Glu Asp Ser Trp Lys Gly

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Ala Ser Val Gln Lys Ser Thr Gly Ser Lys Asn Asp Ser Trp Asp Asn  
 465 470 475 480  
 Asn Asn Arg Ser Thr Gly Gly Ser Trp Asn Phe Gly Pro Gln Asp Ser  
 485 490 495  
 Asn Asp Asn Lys Trp Gly Glu Gly Asn Lys Met Thr Ser Gly Val Ser  
 500 505 510  
 Gln Gly Glu Trp Lys Gln Pro Thr Gly Ser Asp Glu Leu Lys Ile Gly  
 515 520 525  
 Glu Trp Ser Gly Pro Asn Gln Pro Asn Ser Ser Thr Gly Ala Trp Asp  
 530 535 540  
 Asn Gln Lys Gly His Pro Leu Pro Glu Asn Gln Gly Asn Ala Gln Ala  
 545 550 555 560  
 Pro Cys Trp Gly Arg Ser Ser Ser Ser Thr Gly Ser Glu Val Gly Gly  
 565 570 575  
 Gln Ser Thr Gly Ser Asn His Lys Ala Gly Ser Ser Asp Ser His Asn  
 580 585 590  
 Ser Gly Arg Arg Ser Tyr Arg Pro Thr His Pro Asp Cys Gln Ala Val  
 595 600 605  
 Leu Gln Thr Leu Leu Ser Arg Thr Asp Leu Asp Pro Arg Val Leu Ser  
 610 615 620  
 Asn Thr Gly Trp Gly Gln Thr Gln Ile Lys Gln Asp Thr Val Trp Asp  
 625 630 635 640  
 Ile Glu Glu Val Pro Arg Pro Glu Gly Lys Ser Asp Lys Gly Thr Glu  
 645 650 655  
 Gly Trp Glu Ser Ala Ala Thr Gln Thr Lys Asn Ser Gly Gly Trp Gly  
 660 665 670  
 Asp Ala Pro Ser Gln Ser Asn Gln Met Lys Ser Gly Trp Gly Glu Leu  
 675 680 685  
 Ser Ala Ser Thr Glu Trp Lys Asp Pro Lys Asn Thr Gly Gly Trp Asn  
 690 695 700  
 Asp Tyr Lys Asn Asn Asn Ser Ser Asn Trp Gly Gly Gly Arg Pro Asp  
 705 710 715 720  
 Glu Lys Thr Pro Ser Ser Trp Asn Glu Asn Pro Ser Lys Asp Gln Gly  
 725 730 735  
 Trp Gly Gly Gly Arg Gln Pro Asn Gln Gly Trp Ser Ser Gly Lys Asn  
 740 745 750  
 Gly Trp Gly Glu Glu Val Asp Gln Thr Lys Asn Ser Asn Trp Glu Ser  
 755 760 765  
 Ser Ala Ser Lys Pro Val Ser Gly Trp Gly Glu Gly Gly Gln Asn Glu  
 770 775 780  
 Ile Gly Thr Trp Gly Asn Gly Gly Asn Ala Ser Leu Ala Ser Lys Gly  
 785 790 795 800

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Gly Trp Glu Asp Cys Lys Arg Ser Pro Ala Trp Asn Glu Thr Gly Arg  
805 810 815

Gln Pro Asn Ser Trp Asn Lys Gln His Gln Gln Gln Gln Pro Pro Gln  
820 825 830

Gln Pro Pro Pro Pro Gln Pro Glu Ala Ser Gly Ser Trp Gly Gly Pro  
835 840 845

Pro Pro Pro Pro Pro Gly Asn Val Arg Pro Ser Asn Ser Ser Trp Ser  
850 855 860

Ser Gly Pro Gln Pro Ala Thr Pro Lys Asp Glu Glu Pro Ser Gly Trp  
865 870 875 880

Glu Glu Pro Ser Pro Gln Ser Ile Ser Arg Lys Met Asp Ile Asp Asp  
885 890 895

Gly Thr Ser Ala Trp Gly Asp Pro Asn Ser Tyr Asn Tyr Lys Asn Val  
900 905 910

Asn Leu Trp Asp Lys Asn Ser Gln Gly Gly Pro Ala Pro Arg Glu Pro  
915 920 925

Asn Leu Pro Thr Pro Met Thr Ser Lys Ser Ala Ser Asp Ser Lys Ser  
930 935 940

Met Gln Asp Gly Trp Gly Glu Ser Asp Gly Pro Val Thr Gly Ala Arg  
945 950 955 960

His Pro Ser Trp Glu Glu Glu Glu Asp Gly Gly Val Trp Asn Thr Thr  
965 970 975

Gly Ser Gln Gly Ser Ala Ser Ser His Asn Ser Ala Ser Trp Gly Gln  
980 985 990

Gly Gly Lys Lys Gln Met Lys Cys Ser Leu Lys Gly Gly Asn Asn Asp  
995 1000 1005

Ser Trp Met Asn Pro Leu Ala Lys Gln Phe Ser Asn Met Gly Leu  
1010 1015 1020

Leu Ser Gln Thr Glu Asp Asn Pro Ser Ser Lys Met Asp Leu Ser  
1025 1030 1035

Val Gly Ser Leu Ser Asp Lys Lys Phe Asp Val Asp Lys Arg Ala  
1040 1045 1050

Met Asn Leu Gly Asp Phe Asn Asp Ile Met Arg Lys Asp Arg Ser  
1055 1060 1065

Gly Phe Arg Pro Pro Asn Ser Lys Asp Met Gly Thr Thr Asp Ser  
1070 1075 1080

Gly Pro Tyr Phe Glu Lys Gly Gly Ser His Gly Leu Phe Gly Asn  
1085 1090 1095

Ser Thr Ala Gln Ser Arg Gly Leu His Thr Pro Val Gln Pro Leu  
1100 1105 1110

Asn Ser Ser Pro Ser Leu Arg Ala Gln Val Pro Pro Gln Phe Ile  
1115 1120 1125

Ser Pro Gln Val Ser Ala Ser Met Leu Lys Gln Phe Pro Asn Ser

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Gly Leu Ser Pro Gly Leu Phe Asn Val Gly Pro Gln Leu Ser Pro  
 1130 1135 1140  
 1145 1150 1155  
 Gln Gln Ile Ala Met Leu Ser Gln Leu Pro Gln Ile Pro Gln Phe  
 1160 1165 1170  
 Gln Leu Ala Cys Gln Leu Leu Leu Gln Gln Gln Gln Gln Gln Gln  
 1175 1180 1185  
 Leu Leu Gln Asn Gln Arg Lys Ile Ser Gln Ala Val Arg Gln Gln  
 1190 1195 1200  
 Gln Glu Gln Gln Leu Ala Arg Met Val Ser Ala Leu Gln Gln Gln  
 1205 1210 1215  
 Gln Gln Gln Gln Arg Gln Pro Gly Met Lys His Ser Pro Ser His  
 1220 1225 1230  
 Pro Val Gly Pro Lys Pro His Leu Asp Asn Met Val Pro Asn Ala  
 1235 1240 1245  
 Leu Asn Val Gly Leu Pro Asp Leu Gln Thr Lys Gly Pro Ile Pro  
 1250 1255 1260  
 Gly Tyr Gly Ser Gly Phe Ser Ser Gly Gly Met Asp Tyr Gly Met  
 1265 1270 1275  
 Val Gly Gly Lys Glu Ala Gly Thr Glu Ser Arg Phe Lys Gln Trp  
 1280 1285 1290  
 Thr Ser Met Met Glu Gly Leu Pro Ser Val Ala Thr Gln Glu Ala  
 1295 1300 1305  
 Asn Met His Lys Asn Gly Ala Ile Val Ala Pro Gly Lys Thr Arg  
 1310 1315 1320  
 Gly Gly Ser Pro Tyr Asn Gln Phe Asp Ile Ile Pro Gly Asp Thr  
 1325 1330 1335  
 Leu Gly Gly His Thr Gly Pro Ala Gly Asp Ser Trp Leu Pro Ala  
 1340 1345 1350  
 Lys Ser Pro Pro Thr Asn Lys Ile Gly Ser Lys Ser Ser Asn Ala  
 1355 1360 1365  
 Ser Trp Pro Pro Glu Phe Gln Pro Gly Val Pro Trp Lys Gly Ile  
 1370 1375 1380  
 Gln Asn Ile Asp Pro Glu Ser Asp Pro Tyr Val Thr Pro Gly Ser  
 1385 1390 1395  
 Val Leu Gly Gly Thr Ala Thr Ser Pro Ile Val Asp Thr Asp His  
 1400 1405 1410  
 Gln Leu Leu Arg Asp Asn Thr Thr Gly Ser Asn Ser Ser Leu Asn  
 1415 1420 1425  
 Thr Ser Leu Pro Ser Pro Gly Ala Trp Pro Tyr Ser Ala Ser Asp  
 1430 1435 1440  
 Asn Ser Phe Thr Asn Val His Ser Thr Ser Ala Lys Phe Pro Asp  
 1445 1450 1455

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Tyr Lys Ser Thr Trp Ser Pro Asp Pro Ile Gly His Asn Pro Thr  
1460 1465 1470

His Leu Ser Asn Lys Met Trp Lys Asn His Ile Ser Ser Arg Asn  
1475 1480 1485

Thr Thr Pro Leu Pro Arg Pro Pro Pro Gly Leu Thr Asn Pro Lys  
1490 1495 1500

Pro Ser Ser Pro Trp Ser Ser Thr Ala Pro Arg Ser Val Arg Gly  
1505 1510 1515

Trp Gly Thr Gln Asp Ser Arg Leu Ala Ser Ala Ser Thr Trp Ser  
1520 1525 1530

Asp Gly Gly Ser Val Arg Pro Ser Tyr Trp Leu Val Leu His Asn  
1535 1540 1545

Leu Thr Pro Gln Ile Asp Gly Ser Thr Leu Arg Thr Ile Cys Met  
1550 1555 1560

Gln His Gly Pro Leu Leu Thr Phe His Leu Asn Leu Thr Gln Gly  
1565 1570 1575

Thr Ala Leu Ile Arg Tyr Ser Thr Lys Gln Glu Ala Ala Lys Ala  
1580 1585 1590

Gln Thr Ala Leu His Met Cys Val Leu Gly Asn Thr Thr Ile Leu  
1595 1600 1605

Ala Glu Phe Ala Thr Asp Asp Glu Val Ser Arg Phe Leu Ala Gln  
1610 1615 1620

Ala Gln Pro Pro Thr Pro Ala Ala Thr Pro Ser Ala Pro Ala Ala  
1625 1630 1635

Gly Trp Gln Ser Leu Glu Thr Gly Gln Asn Gln Ser Asp Pro Val  
1640 1645 1650

Gly Pro Ala Leu Asn Leu Phe Gly Gly Ser Thr Gly Leu Gly Gln  
1655 1660 1665

Trp Ser Ser Ser Ala Gly Gly Ser Ser Gly Ala Asp Leu Ala Gly  
1670 1675 1680

Ala Ser Leu Trp Gly Pro Pro Asn Tyr Ser Ser Ser Leu Trp Gly  
1685 1690 1695

Val Pro Thr Val Glu Asp Pro His Arg Met Gly Ser Pro Ala Pro  
1700 1705 1710

Leu Leu Pro Gly Asp Leu Leu Gly Gly Gly Ser Asp Ser Ile  
1715 1720 1725

<210> 12  
<211> 3830  
<212> PRT  
<213> Homo sapiens

<400> 12

Met Ala Phe Val Ala Thr Gln Gly Ala Thr Val Val Asp Gln Thr Thr  
1 5 10 15

Leu Met Lys Lys Tyr Leu Gln Phe Val Ala Ala Leu Thr Asp Val Asn  
20 25 30

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Thr Pro Asp Glu Thr Lys Leu Lys Met Met Gln Glu Val Ser Glu Asn  
35 40 45

Phe Glu Asn Val Thr Ser Ser Pro Gln Tyr Ser Thr Phe Leu Glu His  
50 55 60

Ile Ile Pro Arg Phe Leu Thr Phe Leu Gln Asp Gly Glu Val Gln Phe  
65 70 75 80

Leu Gln Glu Lys Pro Ala Gln Gln Leu Arg Lys Leu Val Leu Glu Ile  
85 90 95

Ile His Arg Ile Pro Thr Asn Glu His Leu Arg Pro His Thr Lys Asn  
100 105 110

Val Leu Ser Val Met Phe Arg Phe Leu Glu Thr Glu Asn Glu Glu Asn  
115 120 125

Val Leu Ile Cys Leu Arg Ile Ile Ile Glu Leu His Lys Gln Phe Arg  
130 135 140

Pro Pro Ile Thr Gln Glu Ile His His Phe Leu Asp Phe Val Lys Gln  
145 150 155 160

Ile Tyr Lys Glu Leu Pro Lys Val Val Asn Arg Tyr Phe Glu Asn Pro  
165 170 175

Gln Val Ile Pro Glu Asn Thr Val Pro Pro Pro Glu Met Val Gly Met  
180 185 190

Ile Thr Thr Ile Ala Val Lys Val Asn Pro Glu Arg Glu Asp Ser Glu  
195 200 205

Thr Arg Thr His Ser Ile Ile Pro Arg Gly Ser Leu Ser Leu Lys Val  
210 215 220

Leu Ala Glu Leu Pro Ile Ile Val Val Leu Met Tyr Gln Leu Tyr Lys  
225 230 235 240

Leu Asn Ile His Asn Val Val Ala Glu Phe Val Pro Leu Ile Met Asn  
245 250 255

Thr Ile Ala Ile Gln Val Ser Ala Gln Ala Arg Gln His Lys Leu Tyr  
260 265 270

Asn Lys Glu Leu Tyr Ala Asp Phe Ile Ala Ala Gln Ile Lys Thr Leu  
275 280 285

Ser Phe Leu Ala Tyr Ile Ile Arg Ile Tyr Gln Glu Leu Val Thr Lys  
290 295 300

Tyr Ser Gln Gln Met Val Lys Gly Met Leu Gln Leu Leu Ser Asn Cys  
305 310 315 320

Pro Ala Glu Thr Ala His Leu Arg Lys Glu Leu Leu Ile Ala Ala Lys  
325 330 335

His Ile Leu Thr Thr Glu Leu Arg Asn Gln Phe Ile Pro Cys Met Asp  
340 345 350

Lys Leu Phe Asp Glu Ser Ile Leu Ile Gly Ser Gly Tyr Thr Ala Arg  
355 360 365

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Glu Thr Leu Arg Pro Leu Ala Tyr Ser Thr Leu Ala Asp Leu Val His  
 370 375 380  
 His Val Arg Gln His Leu Pro Leu Ser Asp Leu Ser Leu Ala Val Gln  
 385 390 395 400  
 Leu Phe Ala Lys Asn Ile Asp Asp Glu Ser Leu Pro Ser Ser Ile Gln  
 405 410 415  
 Thr Met Ser Cys Lys Leu Leu Leu Asn Leu Val Asp Cys Ile Arg Ser  
 420 425 430  
 Lys Ser Glu Gln Glu Ser Gly Asn Gly Arg Asp Val Leu Met Arg Met  
 435 440 445  
 Leu Glu Val Phe Val Leu Lys Phe His Thr Ile Ala Arg Tyr Gln Leu  
 450 455 460  
 Ser Ala Ile Phe Lys Lys Cys Lys Pro Gln Ser Glu Leu Gly Ala Val  
 465 470 475 480  
 Glu Ala Ala Leu Pro Gly Val Pro Thr Ala Pro Ala Ala Pro Gly Pro  
 485 490 495  
 Ala Pro Ser Pro Ala Pro Val Pro Ala Pro Pro Pro Pro Pro Pro  
 500 505 510  
 Pro Pro Pro Ala Thr Pro Val Thr Pro Ala Pro Val Pro Pro Phe Glu  
 515 520 525  
 Lys Gln Gly Glu Lys Asp Lys Glu Asp Lys Gln Thr Phe Gln Val Thr  
 530 535 540  
 Asp Cys Arg Ser Leu Val Lys Thr Leu Val Cys Gly Val Lys Thr Ile  
 545 550 555 560  
 Thr Trp Gly Ile Thr Ser Cys Lys Ala Pro Gly Glu Ala Gln Phe Ile  
 565 570 575  
 Pro Asn Lys Gln Leu Gln Pro Lys Glu Thr Gln Ile Tyr Ile Lys Leu  
 580 585 590  
 Val Lys Tyr Ala Met Gln Ala Leu Asp Ile Tyr Gln Val Gln Ile Ala  
 595 600 605  
 Gly Asn Gly Gln Thr Tyr Ile Arg Val Ala Asn Cys Gln Thr Val Arg  
 610 615 620  
 Met Lys Glu Glu Lys Glu Val Leu Glu His Phe Ala Gly Val Phe Thr  
 625 630 635 640  
 Met Met Asn Pro Leu Thr Phe Lys Glu Ile Phe Gln Thr Thr Val Pro  
 645 650 655  
 Tyr Met Val Glu Arg Ile Ser Lys Asn Tyr Ala Leu Gln Ile Val Ala  
 660 665 670  
 Asn Ser Phe Leu Ala Asn Pro Thr Thr Ser Ala Leu Phe Ala Thr Ile  
 675 680 685  
 Leu Val Glu Tyr Leu Leu Asp Arg Leu Pro Glu Met Gly Ser Asn Val  
 690 695 700  
 Glu Leu Ser Asn Leu Tyr Leu Lys Leu Phe Lys Leu Val Phe Gly Ser  
 705 710 715 720

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Val Ser Leu Phe Ala Ala Glu Asn Glu Gln Met Leu Lys Pro His Leu  
725 730 735

His Lys Ile Val Asn Ser Ser Met Glu Leu Ala Gln Thr Ala Lys Glu  
740 745 750

Pro Tyr Asn Tyr Phe Leu Leu Leu Arg Ala Leu Phe Arg Ser Ile Gly  
755 760 765

Gly Gly Ser His Asp Leu Leu Tyr Gln Glu Phe Leu Pro Leu Leu Pro  
770 775 780

Asn Leu Leu Gln Gly Leu Asn Met Leu Gln Ser Gly Leu His Lys Gln  
785 790 795 800

His Met Lys Asp Leu Phe Val Glu Leu Cys Leu Thr Val Pro Val Arg  
805 810 815

Leu Ser Ser Leu Leu Pro Tyr Leu Pro Met Leu Met Asp Pro Leu Val  
820 825 830

Ser Ala Leu Asn Gly Ser Gln Thr Leu Val Ser Gln Gly Leu Arg Thr  
835 840 845

Leu Glu Leu Cys Val Asp Asn Leu Gln Pro Asp Phe Leu Tyr Asp His  
850 855 860

Ile Gln Pro Val Arg Ala Glu Leu Met Gln Ala Leu Trp Arg Thr Leu  
865 870 875 880

Arg Asn Pro Ala Asp Ser Ile Ser His Val Ala Tyr Arg Val Leu Gly  
885 890 895

Lys Phe Gly Gly Ser Asn Arg Lys Met Leu Lys Glu Ser Gln Lys Leu  
900 905 910

His Tyr Val Val Thr Glu Val Gln Gly Pro Ser Ile Thr Val Glu Phe  
915 920 925

Ser Asp Cys Lys Ala Ser Leu Gln Leu Pro Met Glu Lys Ala Ile Glu  
930 935 940

Thr Ala Leu Asp Cys Leu Lys Ser Ala Asn Thr Glu Pro Tyr Tyr Arg  
945 950 955 960

Arg Gln Ala Trp Glu Val Ile Lys Cys Phe Leu Val Ala Met Met Ser  
965 970 975

Leu Glu Asp Asn Lys His Ala Leu Tyr Gln Leu Leu Ala His Pro Asn  
980 985 990

Phe Thr Glu Lys Thr Ile Pro Asn Val Ile Ile Ser His Arg Tyr Lys  
995 1000 1005

Ala Gln Asp Thr Pro Ala Arg Lys Thr Phe Glu Gln Ala Leu Thr  
1010 1015 1020

Gly Ala Phe Met Ser Ala Val Ile Lys Asp Leu Arg Pro Ser Ala  
1025 1030 1035

Leu Pro Phe Val Ala Ser Leu Ile Arg His Tyr Thr Met Val Ala  
1040 1045 1050

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Val Ala Gln Gln Cys Gly Pro Phe Leu Leu Pro Cys Tyr Gln Val  
 1055 1060 1065  
 Gly Ser Gln Pro Ser Thr Ala Met Phe His Ser Glu Glu Asn Gly  
 1070 1075 1080  
 Ser Lys Gly Met Asp Pro Leu Val Leu Ile Asp Ala Ile Ala Ile  
 1085 1090 1095  
 Cys Met Ala Tyr Glu Glu Lys Glu Leu Cys Lys Ile Gly Glu Val  
 1100 1105 1110  
 Ala Leu Ala Val Ile Phe Asp Val Ala Ser Ile Ile Leu Gly Ser  
 1115 1120 1125  
 Lys Glu Arg Ala Cys Gln Leu Pro Leu Phe Ser Tyr Ile Val Glu  
 1130 1135 1140  
 Arg Leu Cys Ala Cys Cys Tyr Glu Gln Ala Trp Tyr Ala Lys Leu  
 1145 1150 1155  
 Gly Gly Val Val Ser Ile Lys Phe Leu Met Glu Arg Leu Pro Leu  
 1160 1165 1170  
 Thr Trp Val Leu Gln Asn Gln Gln Thr Phe Leu Lys Ala Leu Leu  
 1175 1180 1185  
 Phe Val Met Met Asp Leu Thr Gly Glu Val Ser Asn Gly Ala Val  
 1190 1195 1200  
 Ala Met Ala Lys Thr Thr Leu Glu Gln Leu Leu Met Arg Cys Ala  
 1205 1210 1215  
 Thr Pro Leu Lys Asp Glu Glu Arg Ala Glu Glu Ile Val Ala Ala  
 1220 1225 1230  
 Gln Glu Lys Ser Phe His His Val Thr His Asp Leu Val Arg Glu  
 1235 1240 1245  
 Val Thr Ser Pro Asn Ser Thr Val Arg Lys Gln Ala Met His Ser  
 1250 1255 1260  
 Leu Gln Val Leu Ala Gln Val Thr Gly Lys Ser Val Thr Val Ile  
 1265 1270 1275  
 Met Glu Pro His Lys Glu Val Leu Gln Asp Met Val Pro Pro Lys  
 1280 1285 1290  
 Lys His Leu Leu Arg His Gln Pro Ala Asn Ala Gln Ile Gly Leu  
 1295 1300 1305  
 Met Glu Gly Asn Thr Phe Cys Thr Thr Leu Gln Pro Arg Leu Phe  
 1310 1315 1320  
 Thr Met Asp Leu Asn Val Val Glu His Lys Val Phe Tyr Thr Glu  
 1325 1330 1335  
 Leu Leu Asn Leu Cys Glu Ala Glu Asp Ser Ala Leu Thr Lys Leu  
 1340 1345 1350  
 Pro Cys Tyr Lys Ser Leu Pro Ser Leu Val Pro Leu Arg Ile Ala  
 1355 1360 1365  
 Ala Leu Asn Ala Leu Ala Ala Cys Asn Tyr Leu Pro Gln Ser Arg  
 1370 1375 1380

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Glu Lys Ile Ile Ala Ala Leu Phe Lys Ala Leu Asn Ser Thr Asn  
 1385 1390 1395  
 Ser Glu Leu Gln Glu Ala Gly Glu Ala Cys Met Arg Lys Phe Leu  
 1400 1405 1410  
 Glu Gly Ala Thr Ile Glu Val Asp Gln Ile His Thr His Met Arg  
 1415 1420 1425  
 Pro Leu Leu Met Met Leu Gly Asp Tyr Arg Ser Leu Thr Leu Asn  
 1430 1435 1440  
 Val Val Asn Arg Leu Thr Ser Val Thr Arg Leu Phe Pro Asn Ser  
 1445 1450 1455  
 Phe Asn Asp Lys Phe Cys Asp Gln Met Met Gln His Leu Arg Lys  
 1460 1465 1470  
 Trp Met Glu Val Val Val Ile Thr His Lys Gly Gly Gln Arg Ser  
 1475 1480 1485  
 Asp Gly Asn Glu Met Lys Ile Cys Ser Ala Ile Ile Asn Leu Phe  
 1490 1495 1500  
 His Leu Ile Pro Ala Ala Pro Gln Thr Leu Val Lys Pro Leu Leu  
 1505 1510 1515  
 Glu Val Val Met Lys Thr Glu Arg Ala Met Leu Ile Glu Ala Gly  
 1520 1525 1530  
 Ser Pro Phe Arg Glu Pro Leu Ile Lys Phe Leu Thr Arg His Pro  
 1535 1540 1545  
 Ser Gln Thr Val Glu Leu Phe Met Met Glu Ala Thr Leu Asn Asp  
 1550 1555 1560  
 Pro Gln Trp Ser Arg Met Phe Met Ser Phe Leu Lys His Lys Asp  
 1565 1570 1575  
 Ala Arg Pro Leu Arg Asp Val Leu Ala Ala Asn Pro Asn Arg Phe  
 1580 1585 1590  
 Ile Thr Leu Leu Leu Pro Gly Gly Ala Gln Thr Ala Val Arg Pro  
 1595 1600 1605  
 Gly Ser Pro Ser Thr Ser Thr Met Arg Leu Asp Leu Gln Phe Gln  
 1610 1615 1620  
 Ala Ile Lys Ile Ile Ser Ile Ile Val Lys Asn Asp Asp Ser Trp  
 1625 1630 1635  
 Leu Ala Ser Gln His Ser Leu Val Ser Gln Leu Arg Arg Val Trp  
 1640 1645 1650  
 Val Ser Glu Asn Phe Gln Glu Arg His Arg Lys Glu Asn Met Ala  
 1655 1660 1665  
 Ala Thr Asn Trp Lys Glu Pro Lys Leu Leu Ala Tyr Cys Leu Leu  
 1670 1675 1680  
 Asn Tyr Cys Lys Arg Asn Tyr Gly Asp Ile Glu Leu Leu Phe Gln  
 1685 1690 1695

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Leu Leu Arg Ala Phe Thr Gly Arg Phe Leu Cys Asn Met Thr Phe  
1700 1705 1710

Leu Lys Glu Tyr Met Glu Glu Glu Ile Pro Lys Asn Tyr Ser Ile  
1715 1720 1725

Ala Gln Lys Arg Ala Leu Phe Phe Arg Phe Val Asp Phe Asn Asp  
1730 1735 1740

Pro Asn Phe Gly Asp Glu Leu Lys Ala Lys Val Leu Gln His Ile  
1745 1750 1755

Leu Asn Pro Ala Phe Leu Tyr Ser Phe Glu Lys Gly Glu Gly Glu  
1760 1765 1770

Gln Leu Leu Gly Pro Pro Asn Pro Glu Gly Asp Asn Pro Glu Ser  
1775 1780 1785

Ile Thr Ser Val Phe Ile Thr Lys Val Leu Asp Pro Glu Lys Gln  
1790 1795 1800

Ala Asp Met Leu Asp Ser Leu Arg Ile Tyr Leu Leu Gln Tyr Ala  
1805 1810 1815

Thr Leu Leu Val Glu His Ala Pro His His Ile His Asp Asn Asn  
1820 1825 1830

Lys Asn Arg Asn Ser Lys Leu Arg Arg Leu Met Thr Phe Ala Trp  
1835 1840 1845

Pro Cys Leu Leu Ser Lys Ala Cys Val Asp Pro Ala Cys Lys Tyr  
1850 1855 1860

Ser Gly His Leu Leu Leu Ala His Ile Ile Ala Lys Phe Ala Ile  
1865 1870 1875

His Lys Lys Ile Val Leu Gln Val Phe His Ser Leu Leu Lys Ala  
1880 1885 1890

His Ala Met Glu Ala Arg Ala Ile Val Arg Gln Ala Met Ala Ile  
1895 1900 1905

Leu Thr Pro Ala Val Pro Ala Arg Met Glu Asp Gly His Gln Met  
1910 1915 1920

Leu Thr His Trp Thr Arg Lys Ile Ile Val Glu Glu Gly His Thr  
1925 1930 1935

Val Pro Gln Leu Val His Ile Leu His Leu Ile Val Gln His Phe  
1940 1945 1950

Lys Val Tyr Tyr Pro Val Arg His His Leu Val Gln His Met Val  
1955 1960 1965

Ser Ala Met Gln Arg Leu Gly Phe Thr Pro Ser Val Thr Ile Glu  
1970 1975 1980

Gln Arg Arg Leu Ala Val Asp Leu Ser Glu Val Val Ile Lys Trp  
1985 1990 1995

Glu Leu Gln Arg Ile Lys Asp Gln Gln Pro Asp Ser Asp Met Asp  
2000 2005 2010

Pro Asn Ser Ser Gly Glu Gly Val Asn Ser Val Ser Ser Ser Ile  
2015 2020 2025

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Lys Arg Gly Leu Ser Val Asp Ser Ala Gln Glu Val Lys Arg Phe  
 2030 2035 2040  
 Arg Thr Ala Thr Gly Ala Ile Ser Ala Val Phe Gly Arg Ser Gln  
 2045 2050 2055  
 Ser Leu Pro Gly Ala Asp Ser Leu Leu Ala Lys Pro Ile Asp Lys  
 2060 2065 2070  
 Gln His Thr Asp Thr Val Val Asn Phe Leu Ile Arg Val Ala Cys  
 2075 2080 2085  
 Gln Val Asn Asp Asn Thr Asn Thr Ala Gly Ser Pro Gly Glu Val  
 2090 2095 2100  
 Leu Ser Arg Arg Cys Val Asn Leu Leu Lys Thr Ala Leu Arg Pro  
 2105 2110 2115  
 Asp Met Trp Pro Lys Ser Glu Leu Lys Leu Gln Trp Phe Asp Lys  
 2120 2125 2130  
 Leu Leu Met Thr Val Glu Gln Pro Asn Gln Val Asn Tyr Gly Asn  
 2135 2140 2145  
 Ile Cys Thr Gly Leu Glu Val Leu Ser Phe Leu Leu Thr Val Leu  
 2150 2155 2160  
 Gln Ser Pro Ala Ile Leu Ser Ser Phe Lys Pro Leu Gln Arg Gly  
 2165 2170 2175  
 Ile Ala Ala Cys Met Thr Cys Gly Asn Thr Lys Val Leu Arg Ala  
 2180 2185 2190  
 Val His Ser Leu Leu Ser Arg Leu Met Ser Ile Phe Pro Thr Glu  
 2195 2200 2205  
 Pro Ser Thr Ser Ser Val Ala Ser Lys Tyr Glu Glu Leu Glu Cys  
 2210 2215 2220  
 Leu Tyr Ala Ala Val Gly Lys Val Ile Tyr Glu Gly Leu Thr Asn  
 2225 2230 2235  
 Tyr Glu Lys Ala Thr Asn Ala Asn Pro Ser Gln Leu Phe Gly Thr  
 2240 2245 2250  
 Leu Met Ile Leu Lys Ser Ala Cys Ser Asn Asn Pro Ser Tyr Ile  
 2255 2260 2265  
 Asp Arg Leu Ile Ser Val Phe Met Arg Ser Leu Gln Lys Met Val  
 2270 2275 2280  
 Arg Glu His Leu Asn Pro Gln Ala Ala Ser Gly Ser Thr Glu Ala  
 2285 2290 2295  
 Thr Ser Gly Thr Ser Glu Leu Val Met Leu Ser Leu Glu Leu Val  
 2300 2305 2310  
 Lys Thr Arg Leu Ala Val Met Ser Met Glu Met Arg Lys Asn Phe  
 2315 2320 2325  
 Ile Gln Ala Ile Leu Thr Ser Leu Ile Glu Lys Ser Pro Asp Ala  
 2330 2335 2340

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Lys Ile Leu Arg Ala Val Val Lys Ile Val Glu Glu Trp Val Lys  
 2345 2350 2355  
 Asn Asn Ser Pro Met Ala Ala Asn Gln Thr Pro Thr Leu Arg Glu  
 2360 2365 2370  
 Lys Ser Ile Leu Leu Val Lys Met Met Thr Tyr Ile Glu Lys Arg  
 2375 2380 2385  
 Phe Pro Glu Asp Leu Glu Leu Asn Ala Gln Phe Leu Asp Leu Val  
 2390 2395 2400  
 Asn Tyr Val Tyr Arg Asp Glu Thr Leu Ser Gly Ser Glu Leu Thr  
 2405 2410 2415  
 Ala Lys Leu Glu Pro Ala Phe Leu Ser Gly Leu Arg Cys Ala Gln  
 2420 2425 2430  
 Pro Leu Ile Arg Ala Lys Phe Phe Glu Val Phe Asp Asn Ser Met  
 2435 2440 2445  
 Lys Arg Arg Val Tyr Glu Arg Leu Leu Tyr Val Thr Cys Ser Gln  
 2450 2455 2460  
 Asn Trp Glu Ala Met Gly Asn His Phe Trp Ile Lys Gln Cys Ile  
 2465 2470 2475  
 Glu Leu Leu Leu Ala Val Cys Glu Lys Ser Thr Pro Ile Gly Thr  
 2480 2485 2490  
 Ser Cys Gln Gly Ala Met Leu Pro Ser Ile Thr Asn Val Ile Asn  
 2495 2500 2505  
 Leu Ala Asp Ser His Asp Arg Ala Ala Phe Ala Met Val Thr His  
 2510 2515 2520  
 Val Lys Gln Glu Pro Arg Glu Arg Glu Asn Ser Glu Ser Lys Glu  
 2525 2530 2535  
 Glu Asp Val Glu Ile Asp Ile Glu Leu Ala Pro Gly Asp Gln Thr  
 2540 2545 2550  
 Ser Thr Pro Lys Thr Lys Glu Leu Ser Glu Lys Asp Ile Gly Asn  
 2555 2560 2565  
 Gln Leu His Met Leu Thr Asn Arg His Asp Lys Phe Leu Asp Thr  
 2570 2575 2580  
 Leu Arg Glu Val Lys Thr Gly Ala Leu Leu Ser Ala Phe Val Gln  
 2585 2590 2595  
 Leu Cys His Ile Ser Thr Thr Leu Ala Glu Lys Thr Trp Val Gln  
 2600 2605 2610  
 Leu Phe Pro Arg Leu Trp Lys Ile Leu Ser Asp Arg Gln Gln His  
 2615 2620 2625  
 Ala Leu Ala Gly Glu Ile Ser Pro Phe Leu Cys Ser Gly Ser His  
 2630 2635 2640  
 Gln Val Gln Arg Asp Cys Gln Pro Ser Ala Leu Asn Cys Phe Val  
 2645 2650 2655  
 Glu Ala Met Ser Gln Cys Val Pro Pro Ile Pro Ile Arg Pro Cys  
 2660 2665 2670

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Val<sup>2675</sup> Leu Lys Tyr Leu Gly Lys<sup>2680</sup> Thr His Asn Leu Trp<sup>2685</sup> Phe Arg Ser  
 Thr<sup>2690</sup> Leu Met Leu Glu His Gln<sup>2695</sup> Ala Phe Glu Lys Gly<sup>2700</sup> Leu Ser Leu  
 Gln<sup>2705</sup> Ile Lys Pro Lys Gln Thr<sup>2710</sup> Thr Glu Phe Tyr Glu<sup>2715</sup> Gln Glu Ser  
 Ile<sup>2720</sup> Thr Pro Pro Gln Gln Glu<sup>2725</sup> Ile Leu Asp Ser Leu<sup>2730</sup> Ala Glu Leu  
 Tyr<sup>2735</sup> Ser Leu Leu Gln Glu Glu<sup>2740</sup> Asp Met Trp Ala Gly<sup>2745</sup> Leu Trp Gln  
 Lys<sup>2750</sup> Arg Cys Lys Tyr Ser Glu<sup>2755</sup> Thr Ala Thr Ala Ile<sup>2760</sup> Ala Tyr Glu  
 Gln<sup>2765</sup> His Gly Phe Phe Glu Gln<sup>2770</sup> Ala Gln Glu Ser Tyr<sup>2775</sup> Glu Lys Ala  
 Met<sup>2780</sup> Asp Lys Ala Lys Lys Glu<sup>2785</sup> His Glu Arg Ser Asn<sup>2790</sup> Ala Ser Pro  
 Ala<sup>2795</sup> Ile Phe Pro Glu Tyr Gln<sup>2800</sup> Leu Trp Glu Asp His<sup>2805</sup> Trp Ile Arg  
 Cys<sup>2810</sup> Ser Lys Glu Leu Asn Gln<sup>2815</sup> Trp Glu Ala Leu Thr<sup>2820</sup> Glu Tyr Gly  
 Gln<sup>2825</sup> Ser Lys Gly His Ile Asn<sup>2830</sup> Pro Tyr Leu Val Leu<sup>2835</sup> Glu Cys Ala  
 Trp<sup>2840</sup> Arg Val Ser Asn Trp Thr<sup>2845</sup> Ala Met Lys Glu Ala<sup>2850</sup> Leu Val Gln  
 Val<sup>2855</sup> Glu Val Ser Cys Pro Lys<sup>2860</sup> Glu Met Ala Trp Lys<sup>2865</sup> Val Asn Met  
 Tyr<sup>2870</sup> Arg Gly Tyr Leu Ala Ile<sup>2875</sup> Cys His Pro Glu Glu<sup>2880</sup> Gln Gln Leu  
 Ser<sup>2885</sup> Phe Ile Glu Arg Leu Val<sup>2890</sup> Glu Met Ala Ser Ser<sup>2895</sup> Leu Ala Ile  
 Arg<sup>2900</sup> Glu Trp Arg Arg Leu Pro<sup>2905</sup> His Val Val Ser His<sup>2910</sup> Val His Thr  
 Pro<sup>2915</sup> Leu Leu Gln Ala Ala Gln<sup>2920</sup> Gln Ile Ile Glu Leu<sup>2925</sup> Gln Glu Ala  
 Ala<sup>2930</sup> Gln Ile Asn Ala Gly Leu<sup>2935</sup> Gln Pro Thr Asn Leu<sup>2940</sup> Gly Arg Asn  
 Asn<sup>2945</sup> Ser Leu His Asp Met Lys<sup>2950</sup> Thr Val Val Lys Thr<sup>2955</sup> Trp Arg Asn  
 Arg<sup>2960</sup> Leu Pro Ile Val Ser Asp<sup>2965</sup> Asp Leu Ser His Trp<sup>2970</sup> Ser Ser Ile  
 Phe<sup>2975</sup> Met Trp Arg Gln His His<sup>2980</sup> Tyr Gln Ala Ile Val<sup>2985</sup> Thr Ala Tyr

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Glu Asn Ser Ser Gln His Asp Pro Ser Ser Asn Asn Ala Met Leu  
2990 2995 3000

Gly Val His Ala Ser Ala Ser Ala Ile Ile Gln Tyr Gly Lys Ile  
3005 3010 3015

Ala Arg Lys Gln Gly Leu Val Asn Val Ala Leu Asp Ile Leu Ser  
3020 3025 3030

Arg Ile His Thr Ile Pro Thr Val Pro Ile Val Asp Cys Phe Gln  
3035 3040 3045

Lys Ile Arg Gln Gln Val Lys Cys Tyr Leu Gln Leu Ala Gly Val  
3050 3055 3060

Met Gly Lys Asn Glu Cys Met Gln Gly Leu Glu Val Ile Glu Ser  
3065 3070 3075

Thr Asn Leu Lys Tyr Phe Thr Lys Glu Met Thr Ala Glu Phe Tyr  
3080 3085 3090

Ala Leu Lys Gly Met Phe Leu Ala Gln Ile Asn Lys Ser Glu Glu  
3095 3100 3105

Ala Asn Lys Ala Phe Ser Ala Ala Val Gln Met His Asp Val Leu  
3110 3115 3120

Val Lys Ala Trp Ala Met Trp Gly Asp Tyr Leu Glu Asn Ile Phe  
3125 3130 3135

Val Lys Glu Arg Gln Leu His Leu Gly Val Ser Ala Ile Thr Cys  
3140 3145 3150

Tyr Leu His Ala Cys Arg His Gln Asn Glu Ser Lys Ser Arg Lys  
3155 3160 3165

Tyr Leu Ala Lys Val Leu Trp Leu Leu Ser Phe Asp Asp Asp Lys  
3170 3175 3180

Asn Thr Leu Ala Asp Ala Val Asp Lys Tyr Cys Ile Gly Val Pro  
3185 3190 3195

Pro Ile Gln Trp Leu Ala Trp Ile Pro Gln Leu Leu Thr Cys Leu  
3200 3205 3210

Val Gly Ser Glu Gly Lys Leu Leu Leu Asn Leu Ile Ser Gln Val  
3215 3220 3225

Gly Arg Val Tyr Pro Gln Ala Val Tyr Phe Pro Ile Arg Thr Leu  
3230 3235 3240

Tyr Leu Thr Leu Lys Ile Glu Gln Arg Glu Arg Tyr Lys Ser Asp  
3245 3250 3255

Pro Gly Pro Ile Arg Ala Thr Ala Pro Met Trp Arg Cys Ser Arg  
3260 3265 3270

Ile Met His Met Gln Arg Glu Leu His Pro Thr Leu Leu Ser Ser  
3275 3280 3285

Leu Glu Gly Ile Val Asp Gln Met Val Trp Phe Arg Glu Asn Trp  
3290 3295 3300

His Glu Glu Val Leu Arg Gln Leu Gln Gln Gly Leu Ala Lys Cys  
3305 3310 3315

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Tyr Ser Val Ala Phe Glu Lys Ser Gly Ala Val Ser Asp Ala Lys  
 3320 3325 3330  
 Ile Thr Pro His Thr Leu Asn Phe Val Lys Lys Leu Val Ser Thr  
 3335 3340 3345  
 Phe Gly Val Gly Leu Glu Asn Val Ser Asn Val Ser Thr Met Phe  
 3350 3355 3360  
 Ser Ser Ala Ala Ser Glu Ser Leu Ala Arg Arg Ala Gln Ala Thr  
 3365 3370 3375  
 Ala Gln Asp Pro Val Phe Gln Lys Leu Lys Gly Gln Phe Thr Thr  
 3380 3385 3390  
 Asp Phe Asp Phe Ser Val Pro Gly Ser Met Lys Leu His Asn Leu  
 3395 3400 3405  
 Ile Ser Lys Leu Lys Lys Trp Ile Lys Ile Leu Glu Ala Lys Thr  
 3410 3415 3420  
 Lys Gln Leu Pro Lys Phe Phe Leu Ile Glu Glu Lys Cys Arg Phe  
 3425 3430 3435  
 Leu Ser Asn Phe Ser Ala Gln Thr Ala Glu Val Glu Ile Pro Gly  
 3440 3445 3450  
 Glu Phe Leu Met Pro Lys Pro Thr His Tyr Tyr Ile Lys Ile Ala  
 3455 3460 3465  
 Arg Phe Met Pro Arg Val Glu Ile Val Gln Lys His Asn Thr Ala  
 3470 3475 3480  
 Ala Arg Arg Leu Tyr Ile Arg Gly His Asn Gly Lys Ile Tyr Pro  
 3485 3490 3495  
 Tyr Leu Val Met Asn Asp Ala Cys Leu Thr Glu Ser Arg Arg Glu  
 3500 3505 3510  
 Glu Arg Val Leu Gln Leu Leu Arg Leu Leu Asn Pro Cys Leu Glu  
 3515 3520 3525  
 Lys Arg Lys Glu Thr Thr Lys Arg His Leu Phe Phe Thr Val Pro  
 3530 3535 3540  
 Arg Val Val Ala Val Ser Pro Gln Met Arg Leu Val Glu Asp Asn  
 3545 3550 3555  
 Pro Ser Ser Leu Ser Leu Val Glu Ile Tyr Lys Gln Arg Cys Ala  
 3560 3565 3570  
 Lys Lys Gly Ile Glu His Asp Asn Pro Ile Ser Arg Tyr Tyr Asp  
 3575 3580 3585  
 Arg Leu Ala Thr Val Gln Ala Arg Gly Thr Gln Ala Ser His Gln  
 3590 3595 3600  
 Val Leu Arg Asp Ile Leu Lys Glu Val Gln Ser Asn Met Val Pro  
 3605 3610 3615  
 Arg Ser Met Leu Lys Glu Trp Ala Leu His Thr Phe Pro Asn Ala  
 3620 3625 3630

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Thr Asp Tyr Trp Thr Phe Arg Lys Met Phe Thr Ile Gln Leu Ala  
3635 3640 3645

Leu Ile Gly Phe Ala Glu Phe Val Leu His Leu Asn Arg Leu Asn  
3650 3655 3660

Pro Glu Met Leu Gln Ile Ala Gln Asp Thr Gly Lys Leu Asn Val  
3665 3670 3675

Ala Tyr Phe Arg Phe Asp Ile Asn Asp Ala Thr Gly Asp Leu Asp  
3680 3685 3690

Ala Asn Arg Pro Val Pro Phe Arg Leu Thr Pro Asn Ile Ser Glu  
3695 3700 3705

Phe Leu Thr Thr Ile Gly Val Ser Gly Pro Leu Thr Ala Ser Met  
3710 3715 3720

Ile Ala Val Ala Arg Cys Phe Ala Gln Pro Asn Phe Lys Val Asp  
3725 3730 3735

Gly Ile Leu Lys Thr Val Leu Arg Asp Glu Ile Ile Ala Trp His  
3740 3745 3750

Lys Lys Thr Gln Glu Asp Thr Ser Ser Pro Leu Ser Ala Ala Gly  
3755 3760 3765

Gln Pro Glu Asn Met Asp Ser Gln Gln Leu Val Ser Leu Val Gln  
3770 3775 3780

Lys Ala Val Thr Ala Ile Met Thr Arg Leu His Asn Leu Ala Gln  
3785 3790 3795

Phe Glu Gly Gly Glu Ser Lys Val Asn Thr Leu Val Ala Ala Ala  
3800 3805 3810

Asn Ser Leu Asp Asn Leu Cys Arg Met Asp Pro Ala Trp His Pro  
3815 3820 3825

Trp Leu  
3830

<210> 13  
<211> 669  
<212> PRT  
<213> Homo sapiens

<400> 13

Met Lys Ile Phe Val Gly Asn Val Asp Gly Ala Asp Thr Thr Pro Glu  
1 5 10 15

Glu Leu Ala Ala Leu Phe Ala Pro Tyr Gly Thr Val Met Ser Cys Ala  
20 25 30

Val Met Lys Gln Phe Ala Phe Val His Met Arg Glu Asn Ala Gly Ala  
35 40 45

Leu Arg Ala Ile Glu Ala Leu His Gly His Glu Leu Arg Pro Gly Arg  
50 55 60

Ala Leu Val Val Glu Met Ser Arg Pro Arg Pro Leu Asn Thr Trp Lys  
65 70 75 80

Ile Phe Val Gly Asn Val Ser Ala Ala Cys Thr Ser Gln Glu Leu Arg  
85 90 95

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Ser Leu Phe Glu Arg Arg Gly Arg Val Ile Glu Cys Asp Val Val Lys  
100 105 110

Asp Tyr Ala Phe Val His Met Glu Lys Glu Ala Asp Ala Lys Ala Ala  
115 120 125

Ile Ala Gln Leu Asn Gly Lys Glu Val Lys Gly Lys Arg Ile Asn Val  
130 135 140

Glu Leu Ser Thr Lys Gly Gln Lys Lys Gly Pro Gly Leu Ala Val Gln  
145 150 155 160

Ser Gly Asp Lys Thr Lys Lys Pro Gly Ala Gly Asp Thr Ala Phe Pro  
165 170 175

Gly Thr Gly Gly Phe Ser Ala Thr Phe Asp Tyr Gln Gln Ala Phe Gly  
180 185 190

Asn Ser Thr Gly Gly Phe Asp Gly Gln Ala Arg Gln Pro Thr Pro Pro  
195 200 205

Phe Phe Gly Arg Asp Arg Ser Pro Leu Arg Arg Ser Pro Pro Arg Ala  
210 215 220

Ser Tyr Val Ala Pro Leu Thr Ala Gln Pro Ala Thr Tyr Arg Ala Gln  
225 230 235 240

Pro Ser Val Ser Leu Gly Ala Ala Tyr Arg Ala Gln Pro Ser Ala Ser  
245 250 255

Leu Gly Val Gly Tyr Arg Thr Gln Pro Met Thr Ala Gln Ala Ala Ser  
260 265 270

Tyr Arg Ala Gln Pro Ser Val Ser Leu Gly Ala Pro Tyr Arg Gly Gln  
275 280 285

Leu Ala Ser Pro Ser Ser Gln Ser Ala Ala Ala Ser Ser Leu Gly Pro  
290 295 300

Tyr Gly Gly Ala Gln Pro Ser Ala Ser Ala Leu Ser Ser Tyr Gly Gly  
305 310 315 320

Gln Ala Ala Ala Ala Ser Ser Leu Asn Ser Tyr Gly Ala Gln Gly Ser  
325 330 335

Ser Leu Ala Ser Tyr Gly Asn Gln Pro Ser Ser Tyr Gly Ala Gln Ala  
340 345 350

Ala Ser Ser Tyr Gly Val Arg Ala Ala Ala Ser Ser Tyr Asn Thr Gln  
355 360 365

Gly Ala Ala Ser Ser Leu Gly Ser Tyr Gly Ala Gln Ala Ala Ser Tyr  
370 375 380

Gly Ala Gln Ser Ala Ala Ser Ser Leu Ala Tyr Gly Ala Gln Ala Ala  
385 390 395 400

Ser Tyr Asn Ala Gln Pro Ser Ala Ser Tyr Asn Ala Gln Ser Ala Pro  
405 410 415

Tyr Ala Ala Gln Gln Ala Ala Ser Tyr Ser Ser Gln Pro Ala Ala Tyr  
420 425 430

Val Ala Gln Pro Ala Thr Ala Ala Ala Tyr Ala Ser Gln Pro Ala Ala

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Tyr Ala Ala Gln Ala Thr Thr Pro Met Ala Gly Ser Tyr Gly Ala Gln  
 450 455 460  
 Pro Val Val Gln Thr Gln Leu Asn Ser Tyr Gly Ala Gln Ala Ser Met  
 465 470 475 480  
 Gly Leu Ser Gly Ser Tyr Gly Ala Gln Ser Ala Ala Ala Ala Thr Gly  
 485 490 495  
 Ser Tyr Gly Ala Ala Ala Ala Tyr Gly Ala Gln Pro Ser Ala Thr Leu  
 500 505 510  
 Ala Ala Pro Tyr Arg Thr Gln Ser Ser Ala Ser Leu Ala Ala Ser Tyr  
 515 520 525  
 Ala Ala Gln Gln His Pro Gln Ala Ala Ala Ser Tyr Arg Gly Gln Pro  
 530 535 540  
 Gly Asn Ala Tyr Asp Gly Ala Gly Gln Pro Ser Ala Ala Tyr Leu Ser  
 545 550 555 560  
 Met Ser Gln Gly Ala Val Ala Asn Ala Asn Ser Thr Pro Pro Pro Tyr  
 565 570 575  
 Glu Arg Thr Arg Leu Ser Pro Pro Arg Ala Ser Tyr Asp Asp Pro Tyr  
 580 585 590  
 Lys Lys Ala Val Ala Met Ser Lys Arg Tyr Gly Ser Asp Arg Arg Leu  
 595 600 605  
 Ala Glu Leu Ser Asp Tyr Arg Arg Leu Ser Glu Ser Gln Leu Ser Phe  
 610 615 620  
 Arg Arg Ser Pro Thr Lys Ser Ser Leu Asp Tyr Arg Arg Leu Pro Asp  
 625 630 635 640  
 Ala His Ser Asp Tyr Ala Arg Tyr Ser Gly Ser Tyr Asn Asp Tyr Leu  
 645 650 655  
 Arg Ala Ala Gln Met His Ser Gly Tyr Gln Arg Arg Met  
 660 665

<210> 14  
 <211> 456  
 <212> PRT  
 <213> Homo sapiens

<400> 14  
 Met Lys Ile Glu Glu Val Lys Ser Thr Thr Lys Thr Gln Arg Ile Ala  
 1 5 10 15  
 Ser His Ser His Val Lys Gly Leu Gly Leu Asp Glu Ser Gly Leu Ala  
 20 25 30  
 Lys Gln Ala Ala Ser Gly Leu Val Gly Gln Glu Asn Ala Arg Glu Ala  
 35 40 45  
 Cys Gly Val Ile Val Glu Leu Ile Lys Ser Lys Lys Met Ala Gly Arg  
 50 55 60  
 Ala Val Leu Leu Ala Gly Pro Pro Gly Thr Gly Lys Thr Ala Leu Ala  
 65 70 75 80

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Leu Ala Ile Ala Gln Glu Leu Gly Ser Lys Val Pro Phe Cys Pro Met  
 85 90 95  
 Val Gly Ser Glu Val Tyr Ser Thr Glu Ile Lys Lys Thr Glu Val Leu  
 100 105 110  
 Met Glu Asn Phe Arg Arg Ala Ile Gly Leu Arg Ile Lys Glu Thr Lys  
 115 120 125  
 Glu Val Tyr Glu Gly Glu Val Thr Glu Leu Thr Pro Cys Glu Thr Glu  
 130 135 140  
 Asn Pro Met Gly Gly Tyr Gly Lys Thr Ile Ser His Val Ile Ile Gly  
 145 150 155 160  
 Leu Lys Thr Ala Lys Gly Thr Lys Gln Leu Lys Leu Asp Pro Ser Ile  
 165 170 175  
 Phe Glu Ser Leu Gln Lys Glu Arg Val Glu Ala Gly Asp Val Ile Tyr  
 180 185 190  
 Ile Glu Ala Asn Ser Gly Ala Val Lys Arg Gln Gly Arg Cys Asp Thr  
 195 200 205  
 Tyr Ala Thr Glu Phe Asp Leu Glu Ala Glu Glu Tyr Val Pro Leu Pro  
 210 215 220  
 Lys Gly Asp Val His Lys Lys Lys Glu Ile Ile Gln Asp Val Thr Leu  
 225 230 235 240  
 His Asp Leu Asp Val Ala Asn Ala Arg Pro Gln Gly Gly Gln Asp Ile  
 245 250 255  
 Leu Ser Met Met Gly Gln Leu Met Lys Pro Lys Lys Thr Glu Ile Thr  
 260 265 270  
 Asp Lys Leu Arg Gly Glu Ile Asn Lys Val Val Asn Lys Tyr Ile Asp  
 275 280 285  
 Gln Gly Ile Ala Glu Leu Val Pro Gly Val Leu Phe Val Asp Glu Val  
 290 295 300  
 His Met Leu Asp Ile Glu Cys Phe Thr Tyr Leu His Arg Ala Leu Glu  
 305 310 315 320  
 Ser Ser Ile Ala Pro Ile Val Ile Phe Ala Ser Asn Arg Gly Asn Cys  
 325 330 335  
 Val Ile Arg Gly Thr Glu Asp Ile Thr Ser Pro His Gly Ile Pro Leu  
 340 345 350  
 Asp Leu Leu Asp Arg Val Met Ile Ile Arg Thr Met Leu Tyr Thr Pro  
 355 360 365  
 Gln Glu Met Lys Gln Ile Ile Lys Ile Arg Ala Gln Thr Glu Gly Ile  
 370 375 380  
 Asn Ile Ser Glu Glu Ala Leu Asn His Leu Gly Glu Ile Gly Thr Lys  
 385 390 395 400  
 Thr Thr Leu Arg Tyr Ser Val Gln Leu Leu Thr Pro Ala Asn Leu Leu  
 405 410 415  
 Ala Lys Ile Asn Gly Lys Asp Ser Ile Glu Lys Glu His Val Glu Glu  
 420 425 430

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Ile Ser Glu Leu Phe Tyr Asp Ala Lys Ser Ser Ala Lys Ile Leu Ala  
435 440 445

Asp Gln Gln Asp Lys Tyr Met Lys  
450 455

<210> 15  
<211> 475  
<212> PRT  
<213> Homo sapiens

<400> 15

Met Leu Pro Gly Pro Ala Leu Arg Gly Pro Gly Pro Ala Gln Tyr Gln  
1 5 10 15

Arg Pro Gly Met Ser Pro Gly Asn Arg Met Pro Met Ala Arg Leu Ala  
20 25 30

Gly Gly Thr Pro Cys Trp Leu Pro Ile Trp Cys Ser Ser Ser Ala Ser  
35 40 45

Thr Trp His Pro Thr His His Asp Gly Ser Ile Pro Lys Thr Pro Ala  
50 55 60

Cys Ala Pro Ala Gln Pro Pro Met Pro Ala Gln Arg Arg Gly Leu Lys  
65 70 75 80

Arg Arg Lys Met Ala Asp Lys Val Leu Pro Gln Arg Ile Arg Glu Leu  
85 90 95

Val Pro Glu Ser Gln Ala Tyr Met Asp Leu Leu Ala Phe Glu Arg Lys  
100 105 110

Leu Asp Gln Thr Ile Ala Arg Lys Arg Met Glu Ile Gln Glu Ala Ile  
115 120 125

Lys Lys Pro Leu Thr Gln Lys Arg Lys Leu Arg Ile Tyr Ile Ser Asn  
130 135 140

Thr Phe Ser Pro Ser Lys Ala Glu Gly Asp Ser Ala Gly Thr Ala Gly  
145 150 155 160

Thr Pro Gly Gly Thr Pro Ala Gly Asp Lys Val Ala Ser Trp Glu Leu  
165 170 175

Arg Val Glu Gly Lys Leu Leu Asp Asp Pro Ser Lys Gln Lys Arg Lys  
180 185 190

Phe Ser Ser Phe Phe Lys Ser Leu Val Ile Glu Leu Asp Lys Glu Leu  
195 200 205

Tyr Gly Pro Asp Gly His Leu Val Glu Trp Tyr Trp Met Pro Thr Thr  
210 215 220

Gln Glu Thr Asp Gly Phe Gln Val Lys Arg Pro Gly Asp Leu Asn Val  
225 230 235 240

Lys Cys Thr Leu Leu Leu Met Leu Asp His Gln Pro Pro Gln Tyr Lys  
245 250 255

Leu Asp Pro Arg Leu Ala Arg Leu Leu Gly Val His Thr Gln Thr Arg  
260 265 270

Ala Ala Ile Met Gln Ala Leu Trp Leu Tyr Ile Lys His Asn Gln Leu

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Gln Asp Gly His Glu Arg Glu Tyr Ile Asn Cys Asn Arg Tyr Phe Arg  
290 295 300

Gln Ile Phe Ser Cys Gly Arg Leu Arg Phe Ser Glu Ile Pro Met Lys  
305 310 315 320

Leu Ala Gly Leu Leu Gln His Pro Asp Pro Ile Val Ile Asn His Val  
325 330 335

Ile Ser Val Asp Pro Asn Asp Gln Lys Lys Thr Ala Cys Tyr Asp Ile  
340 345 350

Asp Val Glu Val Asp Asp Pro Leu Lys Ala Gln Met Ser Asn Phe Leu  
355 360 365

Ala Ser Thr Thr Asn Gln Gln Glu Ile Ala Ser Leu Asp Val Lys Ile  
370 375 380

His Glu Thr Ile Glu Ser Ile Asn Gln Leu Lys Thr Gln Arg Asp Phe  
385 390 395 400

Met Leu Ser Phe Ser Thr Asp Pro Gln Asp Phe Ile Gln Glu Trp Leu  
405 410 415

Arg Ser Gln Arg Arg Asp Leu Lys Ile Ile Thr Asp Val Thr Gly Asn  
420 425 430

Pro Glu Glu Glu Arg Arg Ala Ala Phe Tyr His Gln Pro Trp Ala Gln  
435 440 445

Glu Ala Val Gly Arg His Ile Phe Ala Lys Val Gln Gln Arg Arg Gln  
450 455 460

Glu Leu Glu Gln Val Leu Gly Ile Arg Leu Thr  
465 470 475

<210> 16  
<211> 1235  
<212> PRT  
<213> Homo sapiens

<400> 16

Met Ala Thr Gly Thr Gly Lys His Lys Leu Leu Ser Thr Gly Pro Thr  
1 5 10 15

Glu Pro Trp Ser Ile Arg Glu Lys Leu Cys Leu Ala Ser Ser Val Met  
20 25 30

Arg Ser Gly Asp Gln Asn Trp Val Ser Val Ser Arg Ala Ile Lys Pro  
35 40 45

Phe Ala Glu Pro Gly Arg Pro Pro Asp Trp Phe Ser Gln Lys His Cys  
50 55 60

Ala Ser Gln Tyr Ser Glu Leu Leu Glu Thr Thr Glu Thr Pro Lys Arg  
65 70 75 80

Lys Arg Gly Glu Lys Gly Glu Val Val Glu Thr Val Glu Asp Val Ile  
85 90 95

Val Arg Lys Leu Thr Ala Glu Arg Val Glu Glu Leu Lys Lys Val Ile  
100 105 110

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Lys Glu Thr Gln Glu Arg Tyr Arg Arg Leu Lys Arg Asp Ala Glu Leu  
115 120 125

Ile Gln Ala Gly His Met Asp Ser Arg Leu Asp Glu Leu Cys Asn Asp  
130 135 140

Ile Ala Thr Lys Lys Lys Leu Glu Glu Glu Glu Ala Glu Val Lys Arg  
145 150 155 160

Lys Ala Thr Asp Ala Ala Tyr Gln Ala Arg Gln Ala Val Lys Thr Pro  
165 170 175

Pro Arg Arg Leu Pro Thr Val Met Val Arg Ser Pro Ile Asp Ser Ala  
180 185 190

Ser Pro Gly Gly Asp Tyr Pro Leu Gly Asp Leu Thr Pro Thr Thr Met  
195 200 205

Glu Glu Ala Thr Ser Gly Val Asn Glu Ser Glu Met Ala Val Ala Ser  
210 215 220

Gly His Leu Asn Ser Thr Gly Val Leu Leu Glu Val Gly Gly Val Leu  
225 230 235 240

Pro Met Ile His Gly Gly Glu Ile Gln Gln Thr Pro Asn Thr Val Ala  
245 250 255

Ala Ser Pro Ala Ala Ser Gly Ala Pro Thr Leu Ser Arg Leu Leu Glu  
260 265 270

Ala Gly Pro Thr Gln Phe Thr Thr Pro Leu Ala Ser Phe Thr Thr Val  
275 280 285

Ala Ser Glu Pro Pro Val Lys Leu Val Pro Pro Pro Val Glu Ser Val  
290 295 300

Ser Gln Ala Thr Ile Val Met Met Pro Ala Leu Pro Ala Pro Ser Ser  
305 310 315 320

Ala Pro Ala Val Ser Thr Thr Glu Ser Val Ala Pro Val Ser Gln Pro  
325 330 335

Asp Asn Cys Val Pro Met Glu Ala Val Gly Asp Pro His Thr Val Thr  
340 345 350

Val Ser Met Asp Ser Ser Glu Ile Ser Met Ile Ile Asn Ser Ile Lys  
355 360 365

Glu Glu Cys Phe Arg Ser Gly Val Ala Glu Ala Pro Val Gly Ser Lys  
370 375 380

Ala Pro Ser Ile Asp Gly Lys Glu Glu Leu Asp Leu Ala Glu Lys Met  
385 390 395 400

Asp Ile Ala Val Ser Tyr Thr Gly Glu Glu Leu Asp Phe Glu Thr Val  
405 410 415

Gly Asp Ile Ile Ala Ile Ile Glu Asp Lys Val Asp Asp His Pro Glu  
420 425 430

Val Leu Asp Val Ala Ala Val Glu Ala Ala Leu Ser Phe Cys Glu Glu  
435 440 445

Asn Asp Asp Pro Gln Ser Leu Pro Gly Pro Trp Glu His Pro Ile Gln  
450 455 460

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Gln Glu Arg Asp Lys Pro Val Pro Leu Pro Ala Pro Glu Met Thr Val  
465 470 475 480

Lys Gln Glu Arg Leu Asp Phe Glu Glu Thr Glu Asn Lys Gly Ile His  
485 490 495

Glu Leu Val Asp Ile Arg Glu Pro Ser Ala Glu Ile Lys Val Glu Pro  
500 505 510

Ala Glu Pro Glu Pro Val Ile Ser Gly Ala Glu Ile Val Ala Gly Val  
515 520 525

Val Pro Ala Thr Ser Met Glu Pro Pro Glu Leu Arg Ser Gln Asp Leu  
530 535 540

Asp Glu Glu Leu Gly Ser Thr Ala Ala Gly Glu Ile Val Glu Ala Asp  
545 550 555 560

Val Ala Ile Gly Lys Gly Asp Glu Thr Pro Leu Thr Asn Val Lys Thr  
565 570 575

Glu Ala Ser Pro Glu Ser Met Leu Ser Pro Ser His Gly Ser Asn Pro  
580 585 590

Ile Glu Asp Pro Leu Glu Ala Glu Thr Gln His Lys Phe Glu Met Ser  
595 600 605

Asp Ser Leu Lys Glu Glu Ser Gly Thr Ile Phe Gly Ser Gln Ile Lys  
610 615 620

Asp Ala Pro Gly Glu Asp Glu Glu Glu Asp Gly Val Ser Glu Ala Ala  
625 630 635 640

Ser Leu Glu Glu Pro Lys Glu Glu Asp Gln Gly Glu Gly Tyr Leu Ser  
645 650 655

Glu Met Asp Asn Glu Pro Pro Val Ser Glu Ser Asp Asp Gly Phe Ser  
660 665 670

Ile His Asn Ala Thr Leu Gln Ser His Thr Leu Ala Asp Ser Ile Pro  
675 680 685

Ser Ser Pro Ala Ser Ser Gln Phe Ser Val Cys Ser Glu Asp Gln Glu  
690 695 700

Ala Ile Gln Ala Gln Lys Ile Trp Lys Lys Ala Ile Met Leu Val Trp  
705 710 715 720

Arg Ala Ala Ala Asn His Arg Tyr Ala Asn Val Phe Leu Gln Pro Val  
725 730 735

Thr Asp Asp Ile Ala Pro Gly Tyr His Ser Ile Val Gln Arg Pro Met  
740 745 750

Asp Leu Ser Thr Ile Lys Lys Asn Ile Glu Asn Gly Leu Ile Arg Ser  
755 760 765

Thr Ala Glu Phe Gln Arg Asp Ile Met Leu Met Phe Gln Asn Ala Val  
770 775 780

Met Tyr Asn Ser Ser Asp His Asp Val Tyr His Met Ala Val Glu Met  
785 790 795 800

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Gln Arg Asp Val Leu Glu Gln Ile Gln Gln Phe Leu Ala Thr Gln Leu  
805 810 815

Ile Met Gln Thr Ser Glu Ser Gly Ile Ser Ala Lys Ser Leu Arg Gly  
820 825 830

Arg Asp Ser Thr Arg Lys Gln Asp Ala Ser Glu Lys Asp Ser Val Pro  
835 840 845

Met Gly Ser Pro Ala Phe Leu Leu Ser Leu Phe Met Gly His Glu Trp  
850 855 860

Val Trp Leu Asp Ser Glu Gln Asp His Pro Asn Asp Ser Glu Leu Ser  
865 870 875 880

Asn Asp Cys Arg Ser Leu Phe Ser Ser Trp Asp Ser Ser Leu Asp Leu  
885 890 895

Asp Val Gly Asn Trp Arg Glu Thr Glu Asp Pro Glu Ala Glu Glu Leu  
900 905 910

Glu Glu Ser Ser Pro Glu Arg Glu Pro Ser Glu Leu Leu Val Gly Asp  
915 920 925

Gly Gly Ser Glu Glu Ser Gln Glu Ala Ala Arg Lys Ala Ser His Gln  
930 935 940

Asn Leu Leu His Phe Leu Ser Glu Val Ala Tyr Leu Met Glu Pro Leu  
945 950 955 960

Cys Ile Ser Ser Asn Glu Ser Ser Glu Gly Cys Cys Pro Pro Ser Gly  
965 970 975

Thr Arg Gln Glu Gly Arg Glu Ile Lys Ala Ser Glu Gly Glu Arg Glu  
980 985 990

Leu Cys Arg Glu Thr Glu Glu Leu Ser Ala Lys Gly Asp Pro Leu Val  
995 1000 1005

Ala Glu Lys Pro Leu Gly Glu Asn Gly Lys Pro Glu Val Ala Ser  
1010 1015 1020

Ala Pro Ser Val Ile Cys Thr Val Gln Gly Leu Leu Thr Glu Ser  
1025 1030 1035

Glu Glu Gly Glu Ala Gln Gln Glu Ser Lys Gly Glu Asp Gln Gly  
1040 1045 1050

Glu Val Tyr Val Ser Glu Met Glu Asp Gln Pro Pro Ser Gly Glu  
1055 1060 1065

Cys Asp Asp Ala Phe Asn Ile Lys Glu Thr Pro Leu Val Asp Thr  
1070 1075 1080

Leu Phe Ser His Ala Thr Ser Ser Lys Leu Thr Asp Leu Ser Gln  
1085 1090 1095

Asp Asp Pro Val Gln Asp His Leu Leu Phe Lys Lys Thr Leu Leu  
1100 1105 1110

Pro Val Trp Lys Met Ile Ala Ser His Arg Phe Ser Ser Pro Phe  
1115 1120 1125

Leu Lys Pro Val Ser Glu Arg Gln Ala Pro Gly Tyr Lys Asp Val  
1130 1135 1140

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Val Lys Arg Pro Met Asp Leu Thr Ser Leu Lys Arg Asn Leu Ser  
1145 1150 1155

Lys Gly Arg Ile Arg Thr Met Ala Gln Phe Leu Arg Asp Leu Met  
1160 1165 1170

Leu Met Phe Gln Asn Ala Val Met Tyr Asn Asp Ser Asp His His  
1175 1180 1185

Val Tyr His Met Ala Val Glu Met Arg Arg Glu Val Leu Glu Gln  
1190 1195 1200

Ile Gln Val Leu Asn Ile Trp Leu Asp Lys Arg Lys Gly Ser Ser  
1205 1210 1215

Ser Leu Glu Gly Glu Pro Ala Asn Pro Val Asp Asp Gly Lys Pro  
1220 1225 1230

Val Phe  
1235

<210> 17  
<211> 513  
<212> PRT  
<213> Homo sapiens  
<400> 17

Met Ala Glu Val Gly Glu Ile Ile Glu Gly Cys Arg Leu Pro Val Leu  
1 5 10 15

Arg Arg Asn Gln Asp Asn Glu Asp Glu Trp Pro Leu Ala Glu Ile Leu  
20 25 30

Ser Val Lys Asp Ile Ser Gly Arg Lys Leu Phe Tyr Val His Tyr Ile  
35 40 45

Asp Phe Asn Lys Arg Leu Asp Glu Trp Val Thr His Glu Arg Leu Asp  
50 55 60

Leu Lys Lys Ile Gln Phe Pro Lys Lys Glu Ala Lys Thr Pro Thr Lys  
65 70 75 80

Asn Gly Leu Pro Gly Ser Arg Pro Gly Ser Pro Glu Arg Glu Val Pro  
85 90 95

Ala Ser Ala Gln Ala Ser Gly Lys Thr Leu Pro Ile Pro Val Gln Ile  
100 105 110

Thr Leu Arg Phe Asn Leu Pro Lys Glu Arg Glu Ala Ile Pro Gly Gly  
115 120 125

Glu Pro Asp Gln Pro Leu Ser Ser Ser Ser Cys Leu Gln Pro Asn His  
130 135 140

Arg Ser Thr Lys Arg Lys Val Glu Val Val Ser Pro Ala Thr Pro Val  
145 150 155 160

Pro Ser Glu Thr Ala Pro Ala Ser Val Phe Pro Gln Asn Gly Ala Ala  
165 170 175

Arg Arg Ala Val Ala Ala Gln Pro Gly Arg Lys Arg Lys Ser Asn Cys  
180 185 190

Leu Gly Thr Asp Glu Asp Ser Gln Asp Ser Ser Asp Gly Ile Pro Ser

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Ala Pro Arg Met Thr Gly Ser Leu Val Ser Asp Arg Ser His Asp Asp  
210 215 220

Ile Val Thr Arg Met Lys Asn Ile Glu Cys Ile Glu Leu Gly Arg His  
225 230 235 240

Arg Leu Lys Pro Trp Tyr Phe Ser Pro Tyr Pro Gln Glu Leu Thr Thr  
245 250 255

Leu Pro Val Leu Tyr Leu Cys Glu Phe Cys Leu Lys Tyr Gly Arg Ser  
260 265 270

Leu Lys Cys Leu Gln Arg His Leu Thr Lys Cys Asp Leu Arg His Pro  
275 280 285

Pro Gly Asn Glu Ile Tyr Arg Lys Gly Thr Ile Ser Phe Phe Glu Ile  
290 295 300

Asp Gly Arg Lys Asn Lys Ser Tyr Ser Gln Asn Leu Cys Leu Leu Ala  
305 310 315 320

Lys Cys Phe Leu Asp His Lys Thr Leu Tyr Tyr Asp Thr Asp Pro Phe  
325 330 335

Leu Phe Tyr Val Met Thr Glu Tyr Asp Cys Lys Gly Phe His Ile Val  
340 345 350

Gly Tyr Phe Ser Lys Glu Lys Glu Ser Thr Glu Asp Tyr Asn Val Ala  
355 360 365

Cys Ile Leu Thr Leu Pro Pro Tyr Gln Arg Arg Gly Tyr Arg Lys Leu  
370 375 380

Leu Ile Glu Phe Ser Tyr Glu Leu Ser Lys Val Glu Gly Lys Thr Gly  
385 390 395 400

Thr Pro Glu Lys Pro Leu Ser Asp Leu Gly Leu Leu Ser Tyr Arg Ser  
405 410 415

Tyr Trp Ser Gln Thr Ile Leu Glu Ile Leu Met Gly Leu Lys Ser Glu  
420 425 430

Ser Gly Glu Arg Pro Gln Ile Thr Ile Asn Glu Ile Ser Glu Ile Thr  
435 440 445

Ser Ile Lys Lys Glu Asp Val Ile Ser Thr Leu Gln Tyr Leu Asn Leu  
450 455 460

Ile Asn Tyr Tyr Lys Gly Gln Tyr Ile Leu Thr Leu Ser Glu Asp Ile  
465 470 475 480

Val Asp Gly His Glu Arg Ala Met Leu Lys Arg Leu Leu Arg Ile Asp  
485 490 495

Ser Lys Cys Leu His Phe Thr Pro Lys Asp Trp Ser Lys Arg Gly Lys  
500 505 510

Trp

<210> 18  
<211> 364  
<212> PRT

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for

<213> Homo sapiens

<400> 18

Met Ser Leu Ala Gly Gly Arg Ala Pro Arg Lys Thr Ala Gly Asn Arg  
1 5 10 15

Leu Ser Gly Leu Leu Glu Ala Glu Glu Glu Asp Glu Phe Tyr Gln Thr  
20 25 30

Thr Tyr Gly Gly Phe Thr Glu Glu Ser Gly Asp Asp Glu Tyr Gln Gly  
35 40 45

Asp Gln Ser Asp Thr Glu Asp Glu Val Asp Ser Asp Phe Asp Ile Asp  
50 55 60

Glu Gly Asp Glu Pro Ser Ser Asp Gly Glu Ala Glu Glu Pro Arg Arg  
65 70 75 80

Lys Arg Arg Val Val Thr Lys Ala Tyr Lys Glu Pro Leu Lys Ser Leu  
85 90 95

Arg Pro Arg Lys Val Asn Thr Pro Ala Gly Ser Ser Gln Lys Ala Arg  
100 105 110

Glu Glu Lys Ala Leu Leu Pro Leu Glu Leu Gln Asp Asp Gly Ser Asp  
115 120 125

Ser Arg Lys Ser Met Arg Gln Ser Thr Ala Glu His Thr Arg Gln Thr  
130 135 140

Phe Leu Arg Val Gln Glu Arg Gln Gly Gln Ser Arg Arg Arg Lys Gly  
145 150 155 160

Pro His Cys Glu Arg Pro Leu Thr Gln Glu Glu Leu Leu Arg Glu Ala  
165 170 175

Lys Ile Thr Glu Glu Leu Asn Leu Arg Ser Leu Glu Thr Tyr Glu Arg  
180 185 190

Leu Glu Ala Asp Lys Lys Lys Gln Val His Lys Lys Arg Lys Cys Pro  
195 200 205

Gly Pro Ile Ile Thr Tyr His Ser Val Thr Val Pro Leu Val Gly Glu  
210 215 220

Pro Gly Pro Lys Glu Glu Asn Val Asp Ile Glu Gly Leu Asp Pro Ala  
225 230 235 240

Pro Ser Val Ser Ala Leu Thr Pro His Ala Gly Thr Gly Pro Val Asn  
245 250 255

Pro Pro Ala Arg Cys Ser Arg Thr Phe Ile Thr Phe Ser Asp Asp Ala  
260 265 270

Thr Phe Glu Glu Trp Phe Pro Gln Gly Arg Pro Pro Lys Val Pro Val  
275 280 285

Arg Glu Val Cys Pro Val Thr His Arg Pro Ala Leu Tyr Arg Asp Pro  
290 295 300

Val Thr Asp Ile Pro Tyr Ala Thr Ala Arg Ala Phe Lys Ile Ile Arg  
305 310 315 320

Glu Ala Tyr Lys Lys Tyr Ile Thr Ala His Gly Leu Pro Pro Thr Ala  
325 330 335

the TIP60 transcriptional activator protein as well as components, fragments and derivatives thereof and methods for use

Ser Ala Leu Gly Pro Gly Pro Pro Pro Pro Glu Pro Leu Pro Gly Ser  
340 345 350

Gly Pro Arg Ala Leu Arg Gln Lys Ile Val Ile Lys  
355 360